

# United States Department of the Interior Bureau of Land Management

## WELLS AND SCHELL FIELD OFFICES

### Antelope Complex Capture Plan And Environmental Assessment



Wild horses at Deer Spring Conveyance (Antelope Valley HMA).

Elko & Ely District Offices NV

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It is the mission of the Bureau of Land Management to sustain the health,  
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# Antelope Complex Gather Capture Plan and EA

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## Table of Contents

1 – INTRODUCTION .....	1
1.1 Purpose and Need.....	1
1.2 Relationship to Laws, Policies and Land Use Plans .....	2
1.2.1 Wild Free-Roaming Horse and Burro Act of 1971, As Amended.....	2
1.2.2 Title 43 Code of Federal Regulations § 4700 .....	3
1.2.3 BLM Land Use Plan Conformance.....	3
1.2.4 Standards and Guidelines for Rangeland Health .....	4
1.2.5 Consistency with Non-BLM Authorities .....	5
1.3 Other NEPA Analyses.....	6
2.0 –ALTERNATIVES.....	8
2.1 Alternative A - Proposed Action.....	9
2.2 Alternative B – Removal to Lower Limit of AML, Adjustment of Sex Ratios. .	11
2.3 Alternative C – Removal Only to AML lower limit .....	11
2.4 Management Actions Common to Alternatives A, B and C .....	12
2.5 Alternative D - Spruce Allotment .....	13
2.6 Management Actions for Alternative D .....	15
2.7 Alternative E - No Action .....	16
2.8 Alternatives Considered But Eliminated From Detailed Analysis.....	16
3 -AFFECTED ENVIRONMENT/EFFECTS OF ALTERNATIVES .....	21
3.1 Scope of Analysis.....	21
3.1.1 Wild Horses .....	23
3.1.2 Water Resources .....	47
3.1.3 Soils.....	52
3.1.4 Wetlands and Riparian Zones .....	55
3.1.5 Vegetation .....	63
3.1.6 Wildlife, Special Status Species, and Migratory Birds and Their Habitat..	67
3.1.7 Livestock.....	73
3.1.8 Wilderness Study Areas and Becky Peak Wilderness .....	77
3.1.9 Cultural Resources .....	85
3.1.10 Health and Safety.....	88
3.2 Cumulative Impacts.....	89
3.2.1 Related Past, Present and Reasonably Foreseeable Future Actions (PPRFFAs).....	90
3.2.2 Cumulative Effects Study Areas (CESAs) .....	91
3.2.3 Cumulative Impacts to Resources.....	92
3.3 Mitigation and Monitoring .....	95
4 CONSULTATION AND COORDINATION .....	96
4.1 General Information .....	96
4.2 Scoping and Issue Identification .....	96
4.3 Issues Not Addressed .....	97
4.4 Coordination with Other Agencies.....	97
4.5 Native American Consultation .....	98
4.6 Preparers.....	98

# Antelope Complex Gather Capture Plan and EA

---

4.7	Distribution.....	98
4.8	References .....	102

## MAPS

Map 1	Antelope Complex Location
Map 2	Spruce-Pequop Herd Management Area (HMA)
Map 3	Goshute HMA
Map 4	Antelope Valley HMA
Map 5	Antelope HMA
Map 6	Spruce-Pequop HMA Water Locations
Map 7	Goshute HMA Water Locations
Map 8	Antelope Valley HMA Water Locations
Map 9	Antelope HMA Water Locations
Map 10	Antelope Complex HMAs Sage Grouse Use Areas
Map 11	Antelope Complex HMAs Pronghorn Use Areas
Map 12	Antelope Complex HMAs Mule Deer Use Areas
Map 13	Antelope Complex HMAs Elko Use Areas
Map 14	Shafter Well Gather Site

## APPENDICES

Appendix A	Standard Operating Procedures for Population Level Fertility Control Treatments
Appendix B	PZP Discussion and Research
Appendix C	Standard Operating Procedures for Gathering and Handling Activities
Appendix D	Bluebell WSA Operating Requirements for the Shafter Well Gather Site
Appendix E	Appropriate Management Level by Allotment for the Antelope Complex
Appendix F	Summary of Allotment and Related Decisions for the Antelope Complex
Appendix G	2010 Antelope Complex Inventory Maps
Appendix H	WinEquus Population Modeling
Appendix I	Antelope Complex Water Resources
Appendix J	Wildlife Species Documented in the Antelope Complex
Appendix K	Potential Terrestrial Vertebrates by Habitat
Appendix L	Observation Day Protocol and Ground Rules
Appendix M	Comments Received and Responses

# Antelope Complex Gather Capture Plan and EA

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## 1 – INTRODUCTION

The Wells and Schell Field Offices (FO) are proposing to remove excess wild horses in the Antelope, Antelope Valley, Spruce-Pequop and Goshute Herd Management Areas (HMA) in the winter of 2011 based on the determination that wild horses are present in excess of the levels at which a thriving natural ecological balance can be maintained. For this analysis, the four HMAs will be referred to as the Antelope Complex (see Map 1). By law, BLM is required to immediately remove excess animals once a determination has been made that excess animals are present.

This Environmental Assessment (EA) contains the site-specific analysis of potential impacts that could result from implementation of the Proposed Action, various alternatives, as well as an analysis of the No Action Alternative. Based on the following analysis, a determination can be made whether to prepare an Environmental Impact Statement (EIS) or issue a “Finding of No Significant Impact” (FONSI). A FONSI documents why implementation of the selected alternative would not result in environmental impacts that significantly affect the quality of the human environment.

### Background Information

The Antelope Complex is located approximately 60 miles south of Wells, Nevada, within Elko and White Pine Counties. The Antelope HMA is managed by the Schell FO in the Ely District and the Antelope Valley, Goshute, and Spruce-Pequop HMAs are managed by the Wells FO in the Elko District. Refer to Map 1 for a general location and Maps 2 through 5 for individual HMAs. Table 1 shows the approximate acres of public and private lands in each HMA. The average annual wild horse population growth rate for each of these HMAs is approximately 18-20%.

**Table 1 Approximate Acres of the HMAs within the Antelope Complex**

HMA	Public Acres	Private Acres	Total Acres
Antelope	331,000	0	331,000
Antelope Valley	496,356	6,553	502,909
Goshute	265,260	2,007	267,267
Spruce-Pequop	214,150	9,419	223,569
<b>Total</b>	<b>1,306,766</b>	<b>17,979</b>	<b>1,324,745</b>

### 1.1 Purpose and Need

The purpose of the Proposed Action (Alternative A) is to remove excess wild horses from the Antelope Complex to maintain the wild horse populations within the appropriate management level (AML) ranges for the HMAs and to restore a thriving natural ecological balance and multiple use relationship on the public lands consistent with the provisions of Section 1333(b) of the 1971 Wild Free-Roaming Horses and Burros Act (WFRHBA).

# Antelope Complex Gather Capture Plan and EA

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The need for the proposed action is to prevent unnecessary or undue degradation of the public lands and to protect rangeland resources from deterioration associated with excess populations of wild horses within the HMAs and use of rangeland resources by wild horses outside the HMA boundaries.

## **1.2 Relationship to Laws, Policies and Land Use Plans**

The Federal Land Policy and Management Act of 1976 (FLPMA) requires that an action under consideration be in conformance with the applicable BLM land use plan, and be consistent with other federal, state, and local laws and policies to the maximum extent possible.

### **1.2.1 Wild Free-Roaming Horse and Burro Act of 1971, As Amended**

The Wild Free Roaming Horse and Burro Act (WFRHBA) requires the Bureau of Land Management (BLM) to manage horses in a manner that will achieve and maintain a “thriving natural ecological balance” on the public lands (16 USC § 1333(a)). *See also Animal Protection Institute of America*, 109 IBLA 112, 115 (1989) (...the benchmark test ‘...for determining the suitable number of wild horses on the public range is ...thriving natural ecological balance...’) (*Dahl v. Clark*, 600 F. Supp. 585, 594 (D. Nev. 1984)).

To achieve a thriving natural ecological balance (TNEB) on the public lands, wild horses and burros (WH&B) should be managed in a manner that assures significant progress is made toward achieving the Land Health Standards for upland vegetation and riparian plant communities, watershed function, and habitat quality for animal populations, as well as other site-specific or landscape-level objectives, including those necessary to protect and manage threatened, endangered, and sensitive species. WH&B herd health is promoted by achieving and maintaining a TNEB.

The Interior Board of Land Appeals (IBLA) rendered several decisions (IBLA 88-591, 88-638, 88-648, and 88-679) which clarified that a wild horse herd size is to be established based on the concept of maintaining a thriving natural ecological balance.

However, Bureau of Land Management wild horse and burro program goals have expanded beyond simply establishing and maintaining a TNEB (i.e. establishing AML for individual herds), to include achieving/maintaining population size within the established AML as well as managing for a healthy, self-sustaining wild horse population. The focus of wild horse management has also expanded to place emphasis on achieving rangeland health as measured through the Standards and Guidelines for Rangeland Health and Healthy Wild Horse Populations developed by the Northeastern Nevada Great Basin Resource Advisory Council (RAC). See Section 1.2.4 for more information regarding the Standards and Guidelines for Rangeland Health. The BLM does not destroy healthy excess animals removed from an HMA; adoptions or sales or placement of excess wild horses in long-term holding are the primary means for caring for the animals removed from the range.



# Antelope Complex Gather Capture Plan and EA

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The Proposed Action (Alternative A), Alternative B, and Alternative C are in conformance with the WFRHBA. However, Alternative D and the No Action Alternative are not in conformance with the WFRHBA.

## **1.2.2 Title 43 Code of Federal Regulations § 4700**

The following are subparts of Title 43 CFR § 4700 that are applicable to the management of wild horses.

- **43 CFR § 4710.4 Constraints on Management**  
Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas. Management shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans.
- **43 CFR § 4720.1 Removal of excess animals from public lands**  
Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately.
- **43 CFR § 4740.1 Use of motor vehicles or aircraft**
  - (a) Motor vehicles and aircraft may be used by the authorized officer in all phases of the administration of the Act, except that no motor vehicle or aircraft, other than helicopters, shall be used for the purpose of herding or chasing wild horses or burros for capture or destruction. All such use shall be conducted in a humane manner.
  - (b) Before using helicopters or motor vehicles in the management of wild horses or burros, the authorized officer shall conduct a public hearing in the area where such use is to be made.

The Proposed Action (Alternative A), Alternative B, and Alternative C are in conformance with Title 43 CFR § 4700. However, Alternative D and the No Action Alternative are not in conformance with Title 43 CFR § 4700.

## **1.2.3 BLM Land Use Plan Conformance**

The Wells Resource Management Plan (RMP) was approved July 16, 1985 and a wild horse amendment was approved in August 1993. In the RMP under Issue 7: Wild Horses, Management Actions 1, 2, and 3 direct the management in the Wells Field Office. The amendment further outlines the level of management for wild horses within the planning area including the Antelope Valley, Goshute and Spruce-Pequot HMAs. The Proposed Action and Alternatives B and C are in conformance with the Wells RMP, as amended.

The Proposed Action (Alternative A) and Alternatives B and C are in conformance with and will achieve the wild horse management objectives in the 2008 Ely District ROD and Approved RMP (August 2008).

# Antelope Complex Gather Capture Plan and EA

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Alternative D would not comply with the Wells RMP however it would comply with the Ely District RMP. Leaving excess wild horses on the range under the No Action Alternative would not comply with the Wells RMP or with the Ely District RMP. However, the No Action Alternative is included as a baseline for comparison with the Proposed Action and other Alternatives, as provided for in the 1969 National Environmental Policy Act (NEPA).

## **1.2.4 Standards and Guidelines for Rangeland Health**

The initial four Standards and Guidelines for Rangeland Health developed by the Northeastern Great Basin Resource Advisory Council (NGBRAC) were approved by the Secretary of the Interior in 1997. The Standards and Guidelines for Wild Horse & Burros were approved in 2000. The NGBRAC Standards and Guidelines for wild horses can be accessed at [http://www.blm.gov/nv/st/en/res/resource\\_advisory/northeastern\\_great/s\\_gs/wild\\_horses.html](http://www.blm.gov/nv/st/en/res/resource_advisory/northeastern_great/s_gs/wild_horses.html).

### **Antelope HMA**

The Antelope HMA has been assessed for conformance with Rangeland Health Standards and Guidelines as part of North Spring Valley, Steptoe Valley, North Antelope Valley and Antelope Valley Watershed Assessments. The assessments found that wild horses are contributing to the non-attainment of the Standards and Guidelines for the Antelope HMA. The assessments recommended that the wild horse population should be maintained within AML for the Antelope HMA to help achieve rangeland health standards. The assessments also concluded that historical levels of grazing use by livestock and wild horses are factors that have contributed to not meeting the standards for rangeland health. The Cultural Standard was met for all HMAs. Health assessments are available for public review at the Ely District Office.

### **Antelope Valley HMA**

The Antelope Valley HMA has been assessed for conformance with Rangeland Health Standards and Guidelines as part of the Currie, Spruce, Badlands/Goshute Mountain and Sheep Allotment Complex Standard and Guidelines Assessments and Allotment Evaluations. The assessments/evaluations found that livestock and wild horses are contributing to the non-attainment of the Standards and Guidelines for the Antelope Valley HMA. The assessment/evaluations/decisions recommended that the wild horse population should be maintained within the AML for the Antelope Valley HMA to help achieve rangeland health standards. The assessments also concluded that historical levels of grazing use by livestock and wild horses are factors that have contributed to not meeting the standards for rangeland health. The Cultural Standard was met for the HMA. Health assessments are available for public review at the Elko District Office.

### **Goshute HMA**



## Antelope Complex Gather Capture Plan and EA

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The Goshute HMA has been assessed for conformance with Rangeland Health Standards and Guidelines as part of the Big Springs and Sheep Allotment Complex allotment evaluations. The assessments/evaluations found that livestock and wild horses are contributing to the non-attainment of the Standard and Guidelines for the Goshute HMA. The assessment/evaluations/decisions recommended that wild horse populations should be maintained within AML for the Goshute HMA to help achieve rangeland health standards. The assessments also concluded that historical levels of grazing use by livestock and wild horses are factors that have contributed to not meeting the standards for rangeland health. The Cultural Standard was met for the HMA. Health assessments are available for public review at the Elko District Office.

### **Spruce-Pequop HMA**

The Spruce/- HMA has been assessed for conformance with Rangeland Health Standards and Guidelines as part of the Spruce Allotment Evaluation and recent monitoring completed from 2006 through 2009. The evaluation and decision recommended that the wild horse population should be maintained within the AML for the Spruce-Pequop HMA to help achieve rangeland health standards. The Cultural Standard was met for the HMA. The allotment evaluation and monitoring data are available for public review at the Elko District Office.

Alternatives A, B, and C would conform with the Northeastern Great Basin Resource Advisory Council (RAC) Standards and Guidelines for Rangeland Health (February 12, 1997) and Healthy Wild Horse and Burro Populations (2000) by bringing the wild horse population back to established AMLs. However, Alternative D and the No Action Alternative would not comply with the Standards and Guidelines for Rangeland Health (1997) and Healthy Wild Horse and Burro Populations (2000) because wild horse populations would remain above the established AMLs.

### **1.2.5 Consistency with Non-BLM Authorities**

The Proposed Action and Alternatives B and C described in Chapter 2 of this EA are consistent with the White Pine County Public Lands Policy Plan as adopted by the White Pine County Board of County Commissioners in August, 2007. On page 23 of the White Pine County Public Lands Policy Plan, it is stated in Policy 6-2, "Manage wild horses to reduce detrimental impacts to other multiple uses. Potential adverse effects on private land, rangelands, wildlife habitat, and water resources should be avoided or properly mitigated." The Proposed Action and Alternatives B and C are also in conformance with the White Pine County Elk Management Plan, revised 2007. However, Alternative D and the No Action Alternative are not in conformance with the White Pine County Public Lands Policy Plan or with the White Pine County Elk Management Plan.

The Proposed Action and Alternatives B and C are also consistent with the 2008 Elko County Public Lands Policy Plan. On page 46 of this plan it is stated in Policy 18-1, "Manage wild horses to reduce detrimental impacts on other multiple uses and pursue resource enhancement where needed to correct wild horse caused damage." and in Policy

## Antelope Complex Gather Capture Plan and EA

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18-2, “Wild horse herds should be managed at reasonable levels...with consideration of the needs of other wildlife species and livestock grazing...” However, Alternative D and the No Action Alternative are not in conformance with the 2008 Elko County Public Lands Policy Plan.

To promote the conservation of the greater sage grouse and its habitat which may occur on public lands in all of the wild horse HMAs, BLM follows the October 2000 “*Management Guidelines for Sage Grouse and Sagebrush Ecosystems in Nevada*” (Nevada Guidelines) and the Western Association of Fish and Wildlife Agencies (WAFWA) Guidelines to manage sage grouse populations and their habitats. The Nevada Guidelines (page 8) recognize grazing has altered sage grouse habitat over the last century, and that the management goal for wild horses is to manage them as components of the public land and in a manner that preserves and maintains a thriving natural ecological balance in a multiple-use relationship. The Proposed Action and the Alternatives B and C are in conformance with the Nevada Guidelines and WAFWA Guidelines. Alternative D and E are not in conformance with the Nevada Guidelines or with the WAFWA Guidelines.

### **1.3 Other NEPA Analyses**

Numerous Environmental Assessments (EAs) have been conducted in past years to analyze the impacts of various removal methods on wild horses and other elements of the human environment including analyses of the gather and removal of wild horses within the Antelope Complex to established AMLs, and the gather and removal of wild horses in response to emergency conditions. These documents include:

- 1) Elko District Office Wild Horse Management Removal Plan and Environmental Assessment EA# NV-010-7-104, 1987.
- 2) Antelope Valley Herd Management Area Plan, EA-NV-010-92-076, 1992.
- 3) Spruce-Pequetop Herd Management Area Wild Horse Plan and Environmental Assessment BLM/EK/PL-93/037, 1993.
- 4) Antelope Valley Herd Management Area Capture Plan and Environmental Assessment BLM/EK/PL-94/022, 1994.
- 5) Wells Resource Area Management Plan Wild Horse Amendment BLM/EK/PL/93-006, 1993.
- 6) Antelope Complex Wild Horse Gather Plan and Environmental Assessment BLM/EK/PL/2001/044, 2001
- 7) Antelope Complex Wild Horse Gather Plan and Environmental Assessment NV-040-01-077, 2001.
- 8) Antelope Complex Wild Horse Gather Plan and Environmental Assessment BLM/EK/PL/2005/001
- 9) Final Grazing Management Decision and Record of Decision for the Sheep Complex, Big Springs and Owyhee Grazing Allotments INT-FES-06-14.
- 10) Antelope and Antelope Valley Herd Management Areas Emergency Wild Horse Gather Plan and Environmental Assessment NV-040-08-EA-04.

# Antelope Complex Gather Capture Plan and EA

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All the documents listed above are available in the Elko and Ely District Offices for public review.

The following table identifies elements of the human environment that are regulated by a statutory or regulatory authority, including those that the BLM determined would not be affected. Those elements that would potentially be affected are analyzed in Chapter 3 of this EA.

**Table 2: Review of Statutory Authorities**

ELEMENT/RESOURCE	Present	Affected	Comment
Air Quality	Yes	No	Any effects would be short term (temporary) and minimal.
Area of Critical Environmental Concern	No	No	No areas of critical environmental concern are within or affected by the proposed gather area.
Cultural Resources	Yes	Yes	Analysis and Discussion in Chapter 3 below.
Environmental Justice	No	No	The Proposed Action would have no effect.
Farm Land -Prime/Unique	Yes	No	The Proposed Action would have no effect.
Floodplains	Yes	No	Resource is present; however, there would be no impacts to this resource from the Proposed Action or Alternatives.
Human Health and Safety	Yes	Yes	Analysis in EA. A risk management worksheet would be prepared to mitigate any hazards that may present themselves.
Migratory Birds	Yes	Yes	Analysis and Discussion in Chapter 3 under Wildlife.
Native American Religious Concerns	Yes	No	Various tribes and bands of the Western Shoshone have stated that federal projects and land actions could have widespread effects to their culture and religion because they consider the landscape as sacred and as a provider. However, the Proposed Action and Alternatives have no known potential to impact any specific Native American religious aspect or Traditional Cultural Property.
Non-Native Invasive and Noxious Species	Yes	No	Any noxious weeds or non-native invasive weeds would be avoided when establishing gather and/or holding facilities and would not be driven through. Noxious weed monitoring at gather/holding sites would be conducted and applicable treatment of weeds would occur as needed. Any areas

# Antelope Complex Gather Capture Plan and EA

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ELEMENT/RESOURCE	Present	Affected	Comment
			disturbed from gathering operations would be reclaimed using a certified weed free native seed mixture to minimize any opportunity for invasive or noxious weeds to be established.
Threatened/Endangered Species	Yes	Yes	Analysis and Discussion in Chapter 3 below under Wildlife.
Water Quality (Surface/Ground)	Yes	Yes	Analysis and Discussion in Chapter 3 under Water Resources.
Wastes, Hazardous/Solid	No	No	Not Present.
Fisheries and Riparian Zones	Yes	Yes	No fisheries within the Antelope Complex. However, Analysis and Discussion for Riparian Zones are in Chapter 3 under Wetlands and Riparian Zones.
Wild & Scenic Rivers	No	No	Not Present.
Wilderness	Yes	Yes	Analysis and Discussion in Chapter 3 under Wilderness.
Wildlife	Yes	Yes	Analysis and Discussion in Chapter 3 under Wildlife.

## 2.0 –ALTERNATIVES

This chapter of the EA describes the Proposed Action and alternatives, including any that were considered but eliminated from detailed analysis. Alternatives analyzed in detail include the following:

- ☐ Alternative A: Proposed Action: Selective removal of excess wild horses to the lower limit of AML, application of two year fertility control to released mares and/or adjustment of the sex ratio to 60% males and 40% females within the Antelope Complex, and removal of any wild horses residing outside the HMAs' boundaries.
- ☐ Alternative B: Removal to lower limit of AML and Adjustment of Sex Ratio. This alternative would include removal of wild horses within the HMA boundaries to the lower limit of AML, adjusting the sex ratio of the remaining wild horse population to 60% males and 40% females and removal of any wild horses residing outside the HMAs boundaries.
- ☐ Alternative C: Removal Only to lower limit of AML. This alternative would include removal of wild horses above the lower limit AML within the HMA boundaries and removal of any wild horses residing outside the HMAs boundaries.
- ☐ Alternative D: Spruce Allotment Alternative, brought forward through comments to the EA. Gather approximately 858 to 1,009 wild horses within the Spruce Allotment (based on 2010 inventory flights), apply fertility control and/or manage sex ratios and remove approximately 404 excess wild horses, with emphasis on removing adoptable wild horses (weanlings to four year old wild horses). This alternative would include removal of wild horses within the remainder of the Antelope Complex to the lower limit of AML, application of a two year fertility control to released mares and/or adjustment of the sex ratio of remaining wild horse population to 60% males and 40%

# Antelope Complex Gather Capture Plan and EA

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females and removal of any wild horses residing outside the HMAs boundaries.

☐ Alternative E: No Action Alternative: Defer gather and removal.

The Proposed Action (Alternative A) and Alternatives B and C were developed to meet the purpose and need (i.e. to remove excess wild horses, maintain AML, ensure a thriving natural ecological balance, and to meet the Standards and Guidelines for Rangeland Health) and in consideration of the issues identified during internal scoping and agency consultation. Although Alternative D and the No Action Alternative (Alternative E) do not comply with the 1971 WFRHBA (as amended) and do not meet the purpose and need for action, they are included as a basis for comparison with the Proposed Action.

## 2.1 Alternative A - Proposed Action

The Proposed Action for the Antelope Complex is to (1) gather approximately 85% of the total estimated population of 2,705 wild horses (This number includes the 2010 foals. Since most of the foals during this gather will be weaned by January they are counted towards AML for this gather.), (2) selectively remove approximately 1,867-2,228 excess wild horses from within the HMAs and approximately 50 from outside the Goshute and Spruce-Pequot HMAs for an approximate total of 1,917-2,278 excess wild horses, and (3) apply two year fertility control to any mares released back to HMA (approximately 214 mares) and/or adjust the sex ratio to 60% males and 40% females within the Antelope Complex.

Of the animals released post-gather, fertility control would be applied to all the released mares to decrease the future population growth rates. Released mares would be selected to maintain a diverse age structure, herd characteristics and conformation (body type). In order to effectively apply fertility control to mares and to adjust sex ratios to favor males, the gather operation would need to capture at least 81-90% of the entire wild horse population within the Antelope Complex. Fertility control treatment would be conducted in accordance with the Standard Operating Procedures (SOPs) for Population Level Fertility Control Treatments in Appendix A.

Each released mare would receive a single dose of the two-year porcine zona pellucida (PZP) contraceptive vaccine. When injected, PZP (antigen) causes the mare's immune system to produce antibodies which then bind to the mare's eggs. This effectively blocks sperm binding and fertilization (Zoo, Montana, 2000). PZP is relatively inexpensive, meets BLM requirements for safety to mares and the environment, and can easily be administered in the field. In addition, among mares, PZP contraception appears to be completely reversible.

The highest success for fertility control has been obtained when applied during the timeframe of November through February. The efficacy for the application of the two-year PZP vaccine based on the proposed winter application is as follows:

<b>Year 1<sup>1</sup></b>	<b>Year 2</b>	<b>Year 3</b>
92%	84%	68%

## Antelope Complex Gather Capture Plan and EA

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<sup>1</sup>Year one is the year following the gather and treatment.

One-time application at the capture site would not affect normal development of the fetus, hormone health of the mare or behavioral responses to stallions, should the mare already be pregnant when vaccinated (Kirkpatrick, 1995). The vaccine has also proven to have no apparent effect on pregnancies in progress, the health of offspring, or the behavior of treated mares (Turner, 1997). Mares would foal normally in Year 1.

The treatment would be controlled, handled, and administered by a trained BLM employee. Mares receiving the vaccine would experience slightly increased stress levels associated with handling while being vaccinated and freeze-marked. Serious injection site reactions associated with fertility control treatments are rare in treated mares. Any direct impacts associated with fertility control, such as swelling or local reactions at the injection site, would be minor in nature and of short duration. Most mares recover quickly once released, and none are expected to have long term effects from the fertility control injections. For more in-depth discussion and research regarding PZP refer to Appendix B. Mares treated and released during the previous gathers were freeze-marked on the left hip with two 4 inch letters for future identification. These identifiers would be recorded along with age and health of the mare for future analysis. Additional letters could be added for future tracking purposes. Newly captured mares that are not marked would be marked with new freeze-mark letters. This information would also be used to determine the number of mares captured that were not previously treated and provide additional insight to gather efficiency.

The following table shows the estimated number of wild horses to be removed and to be treated and released back into the HMAs. Under Alternatives A, B and C the same number of animals would be gathered and released back to the HMA. The only difference among these three alternatives is treatment with PZP and/or adjustment of sex ratio. See Section 2.4 for management actions common to Alternatives A, B and C.



# Antelope Complex Gather Capture Plan and EA

**Table 3. Estimated numbers to be gathered, treated, and released by HMA**

HMA	Estimated Population at gather time (this includes the 2010 foal crop) <sup>1,2</sup>	AML Range for the HMA	Estimated maximum numbers to remove to reach Low/High AML	Estimated maximum number to be treated and/or released back to the HMA Alternatives A, B, & C
Antelope	489	150-324	339-165	150
Antelope Valley	1,003	155-259	848-744	155
Goshute	585	74-123	511-462	74
Spruce-Pequetop	578	48-82	530-496	48
Outside HMAs	50	n/a	50	n/a
<b>Total</b>	<b>2,705</b>	<b>427-788</b>	<b>2,278-1,917</b>	<b>427</b>
<sup>1</sup> Most of the foals during this gather will be weaned by January; therefore they are counted towards AML for this gather.				
<sup>2</sup> Based on October 2010 Wild Horse Inventory.				

Under the Proposed Action, of the maximum 427 wild horses released following the gather, approximately 171-214 would be breeding age mares treated with PZP-prior to their release. Because it is unlikely that BLM would be able to gather 100% of the wild horses within the HMAs, the actual number of mares to be treated and released would almost certainly be less than 214. The exact number of mares to be treated would depend on the total number of wild horses gathered. Post-gather, every effort would be made to return released animals to the same general area within the Complex from whence they were gathered.

## 2.2 Alternative B – Removal to Lower Limit of AML and Adjustment of Sex Ratios

Under this alternative, the same numbers of wild horses would be gathered, removed, and released as in Alternative A. However, only sex ratio adjustments to achieve a 60% male and 40 % female ratio to reduce population growth rates. No fertility control treatments would be applied to released mares. Wild horses that are outside the HMAs would be permanently removed. See Section 2.4 for management actions common to Alternatives A, B and C.

## 2.3 Alternative C – Removal Only to AML lower limit

Under this alternative, there would not be any fertility control treatments or sex ratio adjustments to reduce herd growth rates though the same numbers of wild horses would be gathered, removed, and released as in Alternative A. Wild horses that are outside the Antelope Complex would be permanently removed. See Section 2.4 for management actions common to Alternatives A, B and C.

# Antelope Complex Gather Capture Plan and EA

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## 2.4 Management Actions Common to Alternatives A, B and C

- The Proposed Action and Alternatives B and C would reduce wild horse populations to within their established AML ranges for the Antelope Complex.
- The gather operations on the Antelope Complex would be completed in about 31-40 days.
- All wild horses outside the HMA boundaries would be permanently removed.
- All gathering and handling activities would be conducted in accordance with the SOPs for Gather and Handling Activities described in Appendix C. Several factors such as animal condition, herd health, weather conditions, or other considerations may result in adjustments to the gather schedule.
- Animals would be removed using a selective removal strategy: 1<sup>st</sup> priority – age 4 years and younger; 2<sup>nd</sup> priority – age 11-19; 3<sup>rd</sup> priority – age 5-10. Animals 20 years and older should not be removed from the Antelope Complex unless specific exceptions prevent them from being turned out and left on the range. In general, this age group can survive on the Antelope Complex but would have greater difficulty adapting to captivity and the stress of handling and shipping if removed.
- The Standard Operating Procedures outlined in the following Instruction Memorandum Gather Policy, Selective Removal Criteria, and Management Considerations for Reducing Population Growth Rates would be used for selecting wild horses for release to the Antelope Complex.  
[http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2010/IM\\_2010-135.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2010/IM_2010-135.html)
- The helicopter drive-trapping method would be used and would include multiple gather sites. BLM would be responsible for contractor compliance to national contract specifications, including SOPs (Appendix C).
- Gather sites and holding facilities would be located in previously disturbed areas where feasible unless horses are found in areas that require selection of a new site. Undisturbed areas would be inventoried for cultural resources. If cultural resources are encountered, these locations would not be used unless modifications to avoid impacts to cultural resources are feasible. Gather sites and holding facilities would not be placed in known areas of Native American concern.
- Gather sites and holding facilities would not be located in riparian areas including streams, meadows and/or seeps and springs.
- No gather sites would be set up in/or near sage grouse leks.
- In the case of the Goshute HMA, a gather site would be located within the Bluebell Wilderness Study Area (WSA). The proposed site is located at Shafter Well, located at T33N, R67E, Section 12, NWSE (see Map 14). See Appendix D for operating requirements for the Shafter Well gather site.
- A veterinarian from the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) or licensed contract veterinarian may be consulted, as needed, to examine animals and make recommendations to BLM for care and treatment of the gathered wild horses. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (Washington Office Instruction Memorandum 2009-041). Conditions requiring

# Antelope Complex Gather Capture Plan and EA

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humane euthanasia occur infrequently and are described in more detail in Section 3.1.1. Current policy may be referenced at:

[http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2009/IM\\_2009-041.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html)

- Information such as: age, sex, color, body condition, or other characteristics would be recorded for captured animals.
- Excess animals would be sent to Bureau facilities for adoption, sale, or long-term holding.
- Noxious weed monitoring at gather sites and temporary holding facilities would be conducted in the spring and summer of 2011 by BLM, as a minimum.
- Vehicles would be limited to existing roads except where gather sites are established. However, gather sites would only be established in previously disturbed areas, where possible. If it is not possible to select a disturbed area for a gather site, the newly disturbed area would be seeded with a certified weed free mix following the gather. This mix would consist of site-adapted species that would be broadcasted and dragged prior to March 31, 2012 by the BLM. Weed treatments and inventories would continue in the re-seeded areas as part of regular duties of the Weeds Program.
- Monitoring of forage condition and utilization, water availability, aerial surveys of population and animal health of wild horses would continue post-gather as part of the normal Bureau wild horse and burro program monitoring.
- If gather efficiencies do not allow for the attainment of Alternatives A, B, or C in Winter 2011, the Ely and Elko Districts would return to the Antelope Complex in Fall/Winter 2013 or 2014 to remove any additional wild horses necessary in order to achieve the low range of AML and complete any treatments as outlined in the Proposed Action and Alternatives B and C. Any follow-up gather activities in either Fall/Winter 2013 or 2014 would be conducted in a manner consistent with those described for the Winter 2011 gather. A follow-up gather would be implemented at least two years later because the remaining and released wild horses would have a heightened response to human presence and be more difficult to gather in the year immediately following the initial gather. Funding limitations and competing priorities might also require delaying the follow-up gather component of the Proposed Action, Alternatives B and C to Fall/Winter 2014.

## 2.5 Alternative D - Spruce Allotment

An alternative brought forward through the public comment period on the preliminary Antelope Complex EA would leave more wild horses on the Spruce Allotment (portions of the Antelope Valley and Goshute HMAs, and all of the Spruce-Pequop HMA) and gather to the low end of AML on the remainder of the Antelope Complex. Actions implemented under Alternative D would include the following within the Spruce Allotment Boundary:

- 1) Gather approximately 858 to 1,009 wild horses within the Spruce Allotment (based on 2010 inventory flights),
- 2) Apply fertility control and/or manage sex ratios,
- 3) Remove approximately 404 excess wild horses, with emphasis on removing adoptable wild horses (weanling to four year old wild horses),

## Antelope Complex Gather Capture Plan and EA

- 4) Release approximately 605 wild horses back into the Spruce Allotment.

Within the area outside of the Spruce Allotment boundary (portions of the Antelope, Antelope Valley, and Goshute HMAs, actions would include:

- 1) Gather approximately 1,696 wild horses within the Antelope Complex (based on 2010 inventory flights),
- 2) Apply fertility control and/or manage sex ratios,
- 3) Remove approximately 1,383 excess wild horses to reach the low range of AML for the Antelope Complex outside of the Spruce Allotment boundary, and
- 4) Release approximately 313 wild horses back into the Antelope Complex outside of the Spruce Allotment boundary.

All wild horses outside of the HMAs would be removed.

**Table 4. Estimated Numbers in the Spruce Allotment**

HMA	Estimated Population at gather time (this includes the 2010 foal crop) <sup>1,2</sup>	AML Range for the HMA in the Spruce Allotment	Estimated maximum numbers to remove	Estimated maximum number to be treated and released back to the HMA Alternative D
Antelope Valley	134	67-112	54	80
Goshute	297	29-50	119	178
Spruce-Pequop	578	48-82	231	347
<b>Total</b>	1,009	114-244	404	605
<sup>1</sup> Most of the foals during this gather will be weaned by January; therefore they are counted towards AML for this gather.				
<sup>2</sup> Based on October 2010 Wild Horse Inventory.				

Leaving excess wild horses on the range under the Spruce Alternative would not comply with the 1971 WFRHBA or applicable regulations and Bureau policy, or with either the Wells RMP nor would it comply with the Northeastern Great Basin Resource Advisory Council (RAC) Standards and Guidelines for Rangeland Health (February 12, 1997) and Healthy Wild Horse and Burro Populations (2000). However, it is included as a comparison with the Proposed Action Alternative, as provided for in the 1969 National Environmental Policy Act (NEPA). The Spruce Alternative would allow continued deterioration of rangeland resources, including vegetative, soil and riparian resources, with potentially irreversible loss of native vegetative communities and continued conflict with native wildlife over limited waters in and around the Spruce Allotment. There are no fences/boundaries to prevent wild horses from moving into and out of the Spruce Allotment into adjacent allotments/HMAs. Wild horses would continue to relocate in increasing numbers to areas outside the Spruce Allotment boundaries due to competition for very limited water and forage in the Spruce Allotment, adversely impacting public land resources outside of the Spruce Allotment.

# Antelope Complex Gather Capture Plan and EA

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However, if the Spruce Alternative were selected, a gather would still have to occur at a later date to remove excess wild horses so as to comply with WFRHBA, the land use plan of the Elko District, and the Standards and Guidelines for Rangeland Health.

## 2.6 Management Actions for Alternative D

- The gather operation on the Antelope Complex would be completed in about 31-40 days.
- All wild horses outside the HMA boundaries would be permanently removed.
- All gathering and handling activities would be conducted in accordance with the SOPs for Gathering and Handling Activities described in Appendix C. Several factors such as animal condition, herd health, weather conditions, or other considerations may result in adjustments to the gather schedule.
- The helicopter drive-trapping method would be used and would include multiple gather sites. BLM would be responsible for contractor compliance to national contract specifications, including SOPs (Appendix C).
- All capture and handling activities (including capture site selections) would be conducted in accordance with SOPs (Appendix C).
- Gather sites and holding facilities would be located in previously disturbed areas where feasible, unless horses are found in areas that require selection of a new site. Undisturbed areas would be inventoried for cultural resources. If cultural resources are encountered, these locations would not be used unless modifications to avoid impacts to cultural resources are feasible. Gather sites and holding facilities would not be placed in known areas of Native American concern.
- Gather sites and holding facilities would not be located in riparian areas including streams, meadows and/or seeps and springs.
- No gather sites would be set up in/or near sage grouse leks. .
- In the case of the Goshute HMA, a gather site would be located within the Bluebell Wilderness Study Area (WSA). The proposed site is located at Shafter Well, located at T33N, R67E, Section 12, NWSE (see Map 14). See Appendix D for operating requirements for the Shafter Well gather site.
- A veterinarian from the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) or licensed contract veterinarian may be consulted, as needed, to examine animals and make recommendations to BLM for care and treatment of gathered wild horses. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (Washington Office Instruction Memorandum 2009-041). Conditions requiring humane euthanasia occur infrequently and are described in more detail in Section 3.1.1. Current policy reference:  
[http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2009/IM\\_2009-041.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html)
- Information such as: age, sex, color, body condition, or other characteristics would be recorded for captured animals.
- Excess animals would be sent to Bureau facilities for adoption, sale, or long-term holding.

# Antelope Complex Gather Capture Plan and EA

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- Noxious weed monitoring at gather sites and temporary holding facilities would be conducted in the spring and summer of 2012 by BLM, as a minimum.
- Vehicles would be limited to existing roads except where gather sites are established. However, gather sites would only be established in previously disturbed areas, where possible. If it is not possible to select a disturbed area for a gather site, the newly disturbed area would be seeded with a certified weed free mix following the gather. This mix would consist of site-adapted species that would be broadcasted and dragged prior to March 31, 2012 by the BLM. Weed treatments and inventories would continue in the seeded areas as part of regular duties of the Weeds Program.
- Monitoring of forage condition and utilization, water availability, aerial surveys of population and animal health of wild horses would continue post-gather as part of the normal Bureau wild horse and burro program monitoring.

## **2.7 Alternative E - No Action**

Under the No Action Alternative, a gather to remove excess wild horses would not take place. There would be no active management to control the size of the wild horse population at this time. The current population of wild horses in the Antelope Complex would continue to increase at a rate of 18-20% annually. However, if the No Action Alternative were selected, a gather would have to occur at a later date to remove excess wild horses in order to comply with WFRHBA, the land use plans of the Elko and Ely Districts, and the Standards and Guidelines for Rangeland Health.

## **2.8 Alternatives Considered But Eliminated From Detailed Analysis**

The following alternatives to the helicopter drive trapping method for the removal of wild horses to reach the established AML were considered but eliminated from detailed analysis for the reasons stated below.

### **Chemical Immobilization**

Chemical immobilization as a method of capturing wild horses is not a viable alternative because it is a very specialized technique and is strictly regulated. Currently the BLM does not have sufficient expertise to implement this method and it would be impractical to use given the size of the HMAs, access limitations and approachability of the horses.

### **Use of Wrangler on Horseback Drive-trapping**

Use of wranglers on horseback drive-trapping to remove excess wild horses can be somewhat effective on a small scale but due to the number of horses to gather, the large geographic size of the Antelope Complex, and approachability of the animals, this technique would be ineffective and impractical. Wild horses often outrun and outlast domestic horses carrying riders. Helicopter assisted roping is typically only used if necessary and when the wild horses are in close proximity to the gather site. Horseback drive-trapping to capture wild horses is very labor intensive, can be very harmful to the



# Antelope Complex Gather Capture Plan and EA

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domestic horses used to herd the wild horses, and is dangerous for the riders. For these reasons, this method was eliminated from further consideration.

## **Water/Bait Trapping Alternative**

An alternative which was eliminated from detailed consideration was to water/bait trap wild horses within the Complex. Though water/bait trapping is an effective tool for specific management purposes, this alternative was dismissed from detailed study for the following reasons: (1) the size of the gather area is too large to make this a feasible method; (2) the presence of water sources on both private and public lands inside and outside the HMAs' boundaries would make it almost impossible to restrict wild horse access to only selected water trap sites, which would extend the time required to remove the excess horses or make it impossible to capture all of the excess horses; and (3) access for vehicles necessary to safely transport gathered wild horses is limited. The large geographic area involved, the significant amount of time necessary for implementing this alternative, the time of year (winter), and the difficulty of ensuring wild horse use of only the water trap areas would make it difficult (if not impossible) to gather excess horses within a manageable gather time frame or without a significant increase in gather costs. In addition, vehicles could not access an adequate number of water/bait trap sites and safely transport these captured horses to allow for an effective gather. In summary, bait/water trapping would not be effective and would be much more costly and time-consuming. Given the impracticalities of implementing this alternative for such a large geographic area, this alternative was eliminated from detailed study.

## **Remove or Reduce Livestock Within the HMAs**

This alternative would involve no removal of wild horses and would instead address excess wild horse numbers through removal or reduction of livestock within the HMAs. In essence, this alternative would simply exchange use by livestock for use by wild horses. This alternative was not brought forward for analysis because it is inconsistent with the 1985 Wells RMP, the 1993 Wells RMP Wild Horse Amendment, the 2008 Ely RMP, and the WFRHBA which directs the Secretary to immediately remove excess wild horses. This alternative is also inconsistent with the BLM's multiple use management mission under FLPMA. Additionally, livestock grazing can only be reduced or eliminated following the process outlined in the regulations found at 43 CFR Parts 4100. Such changes to livestock grazing cannot be made through a wild horse gather decision. Furthermore, even with significantly reduced levels of livestock grazing within the Antelope Complex from the levels authorized in the 1985 Wells RMP and 2008 Ely RMP, there is insufficient habitat for the current population of wild horses, as confirmed by monitoring data. As a result, this alternative was not analyzed in detail.

## **Wild Horse Numbers Controlled by Natural Means**

This alternative was eliminated from further consideration because it is contrary to the WFRHBA which requires the BLM to prevent the range from deterioration associated with an overpopulation of wild horses. It is also inconsistent with the 1985 Wells RMP

## Antelope Complex Gather Capture Plan and EA

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and 1993 Wells RMP Wild Horse Amendment, and 2008 Ely RMP which directs that Elko and Ely Districts BLM conduct gathers as necessary to achieve and maintain AML. The alternative of using natural controls to achieve a desirable AML has not been shown to be feasible in the past. Wild horses in the Antelope Complex are not substantially regulated by predators or other natural factors. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95%, and they do not self-regulate their population growth rate. This alternative would result in a steady increase in numbers which would continually exceed the carrying capacity of the range, resulting in ever expanding areas of degraded rangelands, until severe and unusual conditions that occur periodically-- such as blizzards or extreme drought-- cause catastrophic mortality of wild horses.

### **Gathering the Antelope Complex to Upper Range of AML**

Under this Alternative, a gather would be conducted to gather and remove enough wild horses to achieve the upper range of the AML (788 wild horses) within the Antelope Complex. A post-gather population size at the upper range of the AML would result in AML being exceeded following the next foaling season (spring 2012). This would be unacceptable for several reasons.

The AML represents “that ‘optimum number’ of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range” Animal Protection Institute, 109 IBLA 119 (1989). The Interior Board of Land Appeals has also held that, “Proper range management dictates removal of horses before the herd size causes damage to the rangeland. Thus, the optimum number of horses is somewhere below the number that would cause resource damage” Animal Protection Institute, 118 IBLA 63, 75 (1991).

The upper level of the AMLs established for the Antelope Complex HMAs represents the maximum population for which thriving natural ecological balance would be maintained. The lower level represents the number of animals to remain in the Antelope Complex immediately following a wild horse gather in order to allow for a periodic gather cycle and to prevent the population from exceeding the established AML between gathers.

Additionally, gathering only to the upper range of AML, would result in the need to follow up with another gather by the next year and could result in continued overutilization of vegetation resources and damage to important wildlife habitats. Frequent gathers could increase the stress to wild horses, as individuals and as entire herds. For these reasons, this alternative was eliminated from further consideration.

### **Implement Sanctuary Proposal**

Implement a Wild Horse Sanctuary as described in the proposal received by the BLM from Madeline Pickens representing Saving America’s Mustangs Foundation (Foundation). The proposal as presented by Mrs. Pickens is described below.

## Antelope Complex Gather Capture Plan and EA

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Under the proposal, the Foundation would purchase and operate a ranch for the sole purpose of providing proper care and a perpetual home for the horses. This ranch would have yearlong grazing capability, federal and private land for management flexibility, sufficient private land for hay production for wild horses during times of drought, deep snow, and following rangeland fire, and have adequate water and sufficient size to support a wild horse herd.

Mrs. Pickens is proposing to operate an eco-sanctuary for up to 1,000 non-reproducing wild horses on public and private land about 35 miles south of Wells, in Elko County, Nevada at a cost to the American taxpayer of about \$1.25 per horse per day.

Mrs. Pickens purchased 14,120 acres of private land (referred to as the “Spruce Ranch”) which is base property for a grazing preference of 10,908 active and 2,458 suspended Animal Unit Months (AUMs) on the approximately 530,000-acre public land Spruce Grazing Allotment. Her proposal is to use this area for a wild horse eco-sanctuary. There is limited access to the Spruce Allotment base property during the late fall, winter, and early spring. The Spruce Allotment base property is located in Goshute Valley, approximately 30 miles from a paved road. There are no buildings or irrigated meadows on this parcel. This base property is not currently fenced from the adjacent public lands.

Mrs. Pickens also has under contract for purchase, the Warm Springs Ranch and the Davis Place comprising 3,590 and 160 deeded acres, respectively. (The Davis Place is a private in-holding within the USFS Ruby Mountain Ranger District of the Humboldt-Toiyabe National Forest.) The Warm Springs Ranch property is base property for a grazing preference of 1,160 AUMs in the Snow Water Lake Allotment. The Davis Place is base property for a grazing preference of 118 AUMs in the Warm Creek Allotment. Together, the two allotments contain 19,537 acres of public land.

Mrs. Pickens is proposing an initial stocking level of 1,000 wild horses for the Sanctuary. There are three HMAs within the Spruce Allotment: Goshute, Antelope Valley, and Spruce-Pequop. There are no HMAs within the Warm Creek or Snow Water Lake Allotments. The total AML for all three HMAs within the Spruce Allotment is 244 wild horses.

The Spruce, Warm Creek, and Snow Water Lake Allotments include high elevation sagebrush steppe, with tough winters (heavy snow conditions and extremely variable temperature). Elevation at Spruce Mountain, in the central portion of the Spruce Allotment, is 10,200+ feet above sea level. There are two wilderness study areas (WSAs) in the Spruce Allotment. To implement the Pickens proposal as presented, a large portion of the Spruce Allotment boundary would need to be fenced.

## Antelope Complex Gather Capture Plan and EA

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Permitted livestock use for the three allotments is summarized below. Each allotment is currently managed under a grazing system.

Allotment	No.	Type	Season	Active AUMs
Snow Water Lake/Warm Creek	200	Cattle	3/1-7/11 11/1-12/31	1,278
Spruce <sup>1</sup>	909	Cattle	3/1-2/28	10,908
Total				12,186
<sup>1</sup> Permitted use held by OTS, LLC, an entity of Madeline Pickens.				

Mrs. Pickens' brief proposal, while consistent with the Secretary's proposal for government owned/private partner preserves in the Wild Horse Initiative announced last October, was not considered in detail at this time because the sanctuary has not been formally authorized. Mrs. Pickens is continuing to meet with the BLM to receive necessary authorization through development of a contract or Cooperative Agreement. She is also meeting with various stakeholders and members of the public as her proposal moves forward and is developed in more detail.

Implementation of Mrs. Pickens' proposal would require additional environmental analysis. The BLM will fully involve the public in scoping and have an open and transparent process before implanting such a plan. Environmental analysis to implement a wild horse sanctuary would likely require that the Wells Resource Management Plan (Land Use Plan) be amended. If the Land Use Plan were to be amended, that would require publishing of Federal Register Notices and more public meetings than are typical for Environmental Assessments.

The timeframes for this type of environmental analysis is anticipated to take approximately 18 to 24 months to complete once the process is started. Delaying the proposed Antelope Complex Gather until the Pickens' proposed sanctuary could be implemented is not feasible because of the length of time necessary to complete the necessary environmental analysis and the possibility that implementation of a sanctuary proposal exceeds BLM's existing statutory authorities and might not be approved following a public decision-making process or might be delayed. Wild horse numbers would continue to increase above AMLs, resource conditions would be expected to deteriorate, and animal health would be expected to suffer.

In addition, the large number of animals in excess of AML combined with the ongoing dry conditions creates a situation that could lead to emergency conditions and the need for an emergency gather in the summer of 2011 if the Antelope Complex Gather is delayed. In the summer of 2010, agency personnel noted that water in areas was becoming scarce resulting in congestion, violent in-fighting, dramatic loss of body condition and mortality of horses in those areas. The situation required agency personnel to implement emergency water supplementation in the Dolly Varden Range, part of the Antelope Valley HMA, directly adjacent to unfenced areas of the Spruce-Pequop and Goshute HMAs. Delay of the scheduled gather to accommodate implementation of the

# Antelope Complex Gather Capture Plan and EA

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Pickens' sanctuary proposal could lead to significant mortality in some areas due to water starvation, associated injuries which result from fighting over limited water, and winter mortality from loss of body condition going into winter.

## **3 -AFFECTED ENVIRONMENT/EFFECTS OF ALTERNATIVES**

This chapter characterizes the resources that may be affected by the Proposed Action and the alternatives including the No Action alternative, followed by a comparative analysis of the direct, indirect and cumulative impacts of the alternatives. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.

### **3.1 Scope of Analysis**

#### **General Description of the Affected Environment of the Antelope Complex**

The Antelope Complex is located in southeastern Elko County and northeastern White Pine County approximately 60 air miles south of Wells, Nevada. The area is within the Great Basin physiographic region. This region is located in the Great Basin which is one of the largest deserts in the world. The Great Basin is effectively cut off from the westerly flow of Pacific moisture. Orographic uplift of crossing air masses by the Sierra and the Cascades provides cooling and precipitates much of the moisture out. The result is a Dry Steppe cold climate classification for most of the Great Basin. The climate is typical of middle latitude, semi-arid lands where evaporation potential exceeds precipitation throughout the year. Precipitation normally ranges from approximately five to seven inches on the valley bottoms to 16 to 18 inches on the mountain peaks. Most of this precipitation comes during the winter months in the form of snow occurring primarily in the winter and spring with the summers being quite dry. Temperatures range from greater than 90 degrees Fahrenheit in the summer months to minus 15 degrees or colder in the mountains in the winter. The Complex is characterized by long wide valleys and long narrow steep mountain peaks covered with heavy pinyon juniper woodlands. On many of the low hills and ridges that are scattered throughout the area, the soils are underlain by bedrock. Elevations within the Antelope Complex range from approximately 5,000 feet to 10,200 feet.

## Antelope Complex Gather Capture Plan and EA

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Antelope Valley looking north (2010).

The area is also utilized by domestic livestock and numerous wildlife species. The area is bordered to the west by Hwy 93 and to the east by the Utah-Nevada state line.

The boundary between the Antelope HMA and that portion of the Antelope Valley HMA east of Alternate Highway 93 does not have a continuous fence or natural boundary and wild horses move regularly between the HMAs for water and forage. The boundaries between the Antelope Valley, Goshute, and Spruce-Pequot HMAs are not fenced nor do they have any natural boundaries. As a result, wild horses move regularly between the HMAs for water and forage.

The Antelope Complex is very dry with very few perennial waters (see Maps 6-9). The majority of the limited water resources are small seeps and springs that are mainly found in the mountains.

In general, the vegetation consists of big sagebrush-grass and low sagebrush-grass, montane shrub, salt desert shrub, black sagebrush, winterfat, pinyon-juniper, and montane riparian communities.

The foothills and mountain areas are dominated by big sagebrush-grass and low sagebrush-grass types. Primary shrubs are big sagebrush, low sagebrush, and rabbitbrush. Major grass species include bluebunch wheatgrass, Indian ricegrass, Sandberg's bluegrass, needlegrass, and bottlebrush squirreltail. Forbs include milkvetch, arrowleaf balsamroot, lupine, phlox, and aster. The higher mountainous areas support mountain browse species that include serviceberry, snowberry, and antelope bitterbrush. Riparian areas at high elevations support cottonwood and wild rose.



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## Antelope Complex Gather Capture Plan and EA

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The valleys are dominated by salt desert shrub and black sagebrush communities which consist of winterfat, shadscale, bud sagebrush, black sagebrush, and rabbitbrush. Major grass species in the valleys include Indian ricegrass, Sandberg's bluegrass, needlegrass, and bottlebrush squirreltail. Forbs include milkvetch, lupine, phlox, and aster.

### 3.1.1 Wild Horses

#### Affected Environment

AML is defined as the maximum number of wild horses that can be sustained within a designated HMA which achieves and maintains a thriving natural ecological balance keeping within the multiple-use management concept for the area. The AML for the Antelope Complex HMA was established as a population range of 427-788 between 1990 and 2006 through public decision making processes that culminated in the Final Multiple Use Decisions (FMUDs) following an in-depth analysis of monitoring data collected over several years. See Appendix E and F for AML in each HMA by allotment and a summary of allotment and related decisions for the Antelope Complex.

In the Antelope Complex, wild horse population growth rates average 18-20% per year. Population inventory flights have been conducted in the Antelope Complex regularly. These population inventory flights have provided information pertaining to: population numbers, foaling rates, and distribution.

Prior to and during the claiming period which allowed horse owners to claim estray horses following the passage of WFRHBA, some wild horses were gathered in water traps (see picture below), and it was not until the late 1990's-early 2000's that the complex as a whole was gathered.



Summit Spring water trap 1974-1975 in the Goshute Mountains (Bluebell WSA).

## Antelope Complex Gather Capture Plan and EA

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In attempt to achieve and maintain AML, the entire Antelope Complex has been gathered three times in the last ten years. In 2001, 2,200 excess wild horses were removed from the Antelope Complex and in 2004-2005, 1,548 excess wild horses were removed. Following the 2004-2005 gather it was estimated that 473 wild horses remained on the range. In 2007, an emergency gather was conducted resulting in the removal of 847 excess wild horses.

In 2001, the Nevada Department of Transportation (NDOT) fenced the Highway 93 Right of Way (ROW) to improve public safety as numerous vehicle/horse collisions had occurred in previous years. This fence separates the western portion of the Antelope Valley HMA from the rest of the HMA. The wild horses in the western portion of the HMA move freely back and forth with wild horses from the Maverick/Medicine HMA. It was last gathered as part of the Buck and Bald Complex Gather in 2006.

In the spring of 2007, the NDOT fenced the Alternate Highway 93 right-of-way to ensure public safety. This new fence separates the eastern 1/3 of the Antelope Valley HMA from the rest of the HMA, with the result that the animals in this area can no longer move to their traditional winter range in the Dolly Varden Mountains. However, wild horses have been observed moving from the northern portions (north of the highway right-of-way fence) of Antelope Valley HMA into the Goshute HMA.

In October 2007, a population inventory flight found a total of 1,181 wild horses in the Antelope HMA and in the eastern portion of the Antelope Valley HMA (east of the Alternate Highway 93 fence). Coupled with the fence project, the area was also heavily impacted by continuing drought conditions and lack of available water in 2007. In December 2007 the BLM conducted an Emergency Gather of wild horses in the Antelope HMA and the eastern portion of the Antelope Valley HMA and removed a total of 847 excess wild horses.

Assessments for conformance with Rangeland Health Standards have been completed and are ongoing for the grazing allotments in the Antelope Complex. As assessments are updated, additional adjustments in livestock season of use, livestock numbers, wild horse numbers, and grazing systems may be made through the allotment evaluation/MUD process.

In December 2007, the Wells Field Office conducted a population inventory flight of the Antelope Valley HMA (west of the Alternate Highway 93 fence), Goshute and Spruce-Pequop HMAs and found 624 wild horses in the those HMAs.

Population inventories were completed for the Antelope Complex in 2009 and 2010. For maps of the 2010 flights, refer to Appendix G. Based on the 2010 population inventories, the current estimated population for the Antelope Complex and areas outside of the Complex is approximately 2,705 wild horses (which includes the 2010 foal crop). Most of the foals during this gather will be weaned by January; therefore BLM is counting them towards AML for this gather. These population inventories indicate the current

## Antelope Complex Gather Capture Plan and EA

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population is about six times the low range of the AML, or 2,278 wild horses above the low range AML. The BLM has conducted inventory flights of the Antelope Complex this fall to verify numbers. Population inventories indicate an average annual growth rate for the Antelope Complex wild horse herd of 18-20% per year over the past several years.

Extensive on-the-ground monitoring in the Antelope Complex shows a very limited supply of water on public lands (see Maps 6-9). Many of these springs and seeps provide low flows with most of the water sources producing well below a gallon per minute. Waters located on private lands are sustaining the existing wild horse population and are receiving significant resource impacts associated with this use. The Antelope Complex's limited water resources simply cannot support large numbers of wild horses above the AML range especially in dry years. Due to the lack of available year-round waters on public lands and the impacts from wild horses to the limited riparian areas, AMLs would be re-evaluated in the future taking water availability into account as water availability was not used in the establishment of previous AMLs. In 2007, 2008 and 2010, the BLM hauled water for wild horses in the Antelope Complex due to lack of available water. To illustrate the lack of water: in July 2010 the BLM found 80-100 wild horses around the Deer Spring conveyance while water flow was estimated at 4.7 gallons/hour (gph). To address the lack of water, the Elko BLM installed a guzzler in July 2010 near the spring and hauled water to the guzzler on several occasions after installation. In August 2010, with 80 wild horses at the spring, flow had decreased to three gph. In September 2010, a BLM specialist found that while the spring flow rate remained at three gph, the number of wild horses around the spring had increased to approximately 200. Based on site visits in the summer and fall 2010 to all of the springs in the Dolly Varden Range, the estimated available perennial water for wild horses on public lands is 14-20 gallons per/hour. Horses need 12-15 gallons per day; if the horses drink a minimum of 12 gallons per day, the springs provide water to support 28 to 40 horses. The flow rates at the springs ranges from 6 gallons/hour to no measurable flow. The current excess population of wild horses is resulting in increased demand for water and increased impacts to riparian areas. A reduction in wild horse numbers to the low range of the AML or 427 wild horses would reduce the demand for the very limited water resources.



## Antelope Complex Gather Capture Plan and EA

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Wild horse impacts at Deer Spring conveyance with guzzler and overflow hose. Vegetation around Deer Spring conveyance has been denuded by wild horses. (August 2010). Livestock season of use is from 11/1 to 5/15.



Wild horses waiting for a chance to drink water at Deer Spring conveyance (September 2010). Livestock season of use is from 11/1 to 5/15.



## Antelope Complex Gather Capture Plan and EA

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Mare and foal at Deer Spring conveyance (September 2010). Livestock season of use is from 11/1 to 5/15.



Deer Spring conveyance (September 2010) showing very limited available water and area vegetation denuded by wild horse use. Livestock season of use is from 11/1 to 5/15.

A Wild Horse amendment to the Wells Resource Management Plan was approved in August 1993. This amendment further outlined the level of management for wild horses within the planning area including the Antelope Valley, Goshute and Spruce-Pequop HMAs. The Amendment established wild horse pre-livestock allowable use levels at 10%. (“Utilization of key forage species by wild horses in areas used in common will not exceed an average of 10 percent prior to entry by livestock”). This objective has not been

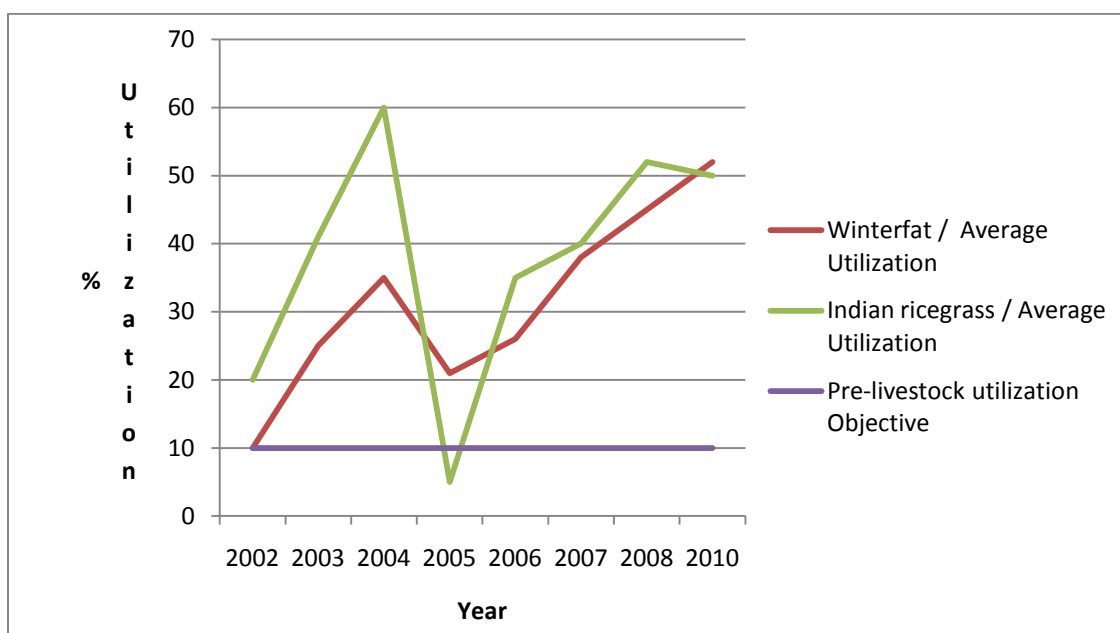
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## Antelope Complex Gather Capture Plan and EA

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achieved due to dry conditions and excess wild horse numbers. Utilization by wild horses prior to entry by livestock has averaged 31.5% on winterfat and 38% on Indian ricegrass.

Analysis of 2006 through 2010 pre-livestock field monitoring data clearly demonstrates an excess of wild horses in the Antelope Complex. Measurements of upland utilization on key grass species ranged from 12 percent to 64 percent, including areas rested from livestock use and winter use areas. Measurements of upland utilization on the key shrub species winterfat (*Krascheninnikovia lanata*) ranged from 21 percent to 78 percent, including areas rested from livestock use and winter use areas. Analysis of pre-livestock field monitoring data clearly shows a correlation between high utilization levels and excessive wild horses. See graph below:



The Antelope Complex was gathered in 2001-2002. The utilization chart above begins with pre-livestock utilization in the fall of 2002. The dip in utilization made by wild horses in the fall of 2005 correlates to the decreased wild horse numbers after the gather in late 2004-05.

Observations in the spring of 2009 showed excessive use by wild horses on winterfat in the Antelope Complex, well above the identified utilization objective. See pictures below.



## Antelope Complex Gather Capture Plan and EA

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Excessive utilization on winterfat by wild horses in the Antelope Complex. Use occurred in an area not grazed by livestock due to excessive wild horse numbers. (Spring 2009)



Excessive utilization on winterfat by wild horses in the Antelope Complex. Use occurred in an area not grazed by livestock due to excessive wild horse numbers. A quarter is used for scale. (Spring 2009)

In May 2010 monitoring measurements of upland utilization by wild horses on the key shrub species winterfat ranged from 34 percent to 52 percent on previous (2009) year's growth.



## Antelope Complex Gather Capture Plan and EA

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Heavy trailing by wild horses is evident in mountains areas, at riparian areas, water developments and wilderness study areas (WSAs). See pictures below.



Trails made by wild horses to Rock Spring (located lower left) in the Bluebell WSA (2009). Authorized livestock season of use is 11/1-12/1.



Excessive use by wild Horses at Rock Spring, Bluebell WSA (August 2009). Authorized livestock season of use is 11/1-12/1.



## Antelope Complex Gather Capture Plan and EA

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Trails made by wild horses in the Dolly Varden Range (2010). This is part of unit F-2 (not part of livestock grazing permit) in the Spruce/Valley Mountain Allotments. No livestock AUMs are authorized in this portion of Dolly Varden Range.



Trails made by wild horses in the Goshute Mountains (2010). The authorized livestock season of use is 11/1-12/1.

## Antelope Complex Gather Capture Plan and EA

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Unnamed spring in Bluebell WSA showing very limited flow and negative impacts by wild horses (2010). The authorized livestock season of use is 11/1-12/1 and from 4/1-4/30; however this area is not included for use in the 2010 grazing schedule.

There is growing concern about limited water and forage available to wild horses, livestock, and wildlife in the desert climate of the Great Basin. Heavy use of forage near available water and competition between wild horses, livestock, and wildlife for limited forage and water has increased. An NDOW Wildlife biologist has observed, “The aggressive nature of wild horses kept elk from drinking, in some cases, and in other cases temporarily delayed their apparent need for water for approximately one hour. The aggressive acts documented included bluff charges and in one case a horse biting the rump of an adult elk” (McAdoo, 2010). The livestock permittees haul water, provide water in water pipelines or pump wells for their livestock. However, when livestock are not turned out there is limited water for wild horses.

The U.S. Drought Monitor continues to show abnormally dry conditions on portions of the Antelope Complex in early November 2010. Information can be found at the following link: <http://drought.unl.edu/dm/monitor.html>

Excessive use by wild horses has been observed and documented on reclaimed and re-vegetated mining sites in the Dolly Varden Range (Bergwall, 2010).

Given the dry conditions and the expanding horse numbers along with the limited perennial water sources in the Antelope Complex, there is a real concern that wild horses could suffer from dehydration and possible death in the Antelope Complex. BLM is and will be actively monitoring this situation leading up to the proposed gather operation.

### **Fertility Control**



## Antelope Complex Gather Capture Plan and EA

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Fertility control has been conducted within the Antelope Complex three times previously. The Antelope Valley HMA was used as the original case study for fertility control for BLM. The gather was conducted in 1992 and 132 mares were treated with PZP. Twenty nine of those mares were treated with a one dose version which was being tested to determine if one year of fertility control could be achieved. Additionally, 103 mares were transported to the BLM holding facility in Palomino Valley. These mares were treated with the same one shot vaccine and then given a booster 14 days later. These 103 mares were then released back to Antelope Valley HMA. The two shot dose was being tested to determine if this treatment protocol boosted the efficacy of the one year vaccine compared to the one shot protocol. A Final Report by Turner, Lieu, and Kirkpatrick 1995 on the Field Study can be found at the Elko District Office.

The entire Antelope Complex was gathered in 1998; 511 mares were treated and released with the two year vaccine (46 mares originally from the 1992 gather were recaptured and treated as part of the 511 mares). No extensive data were collected following the 1998 gather.

The Antelope Complex was also gathered in 2004, with 73 mares being treated and released.

### **Genetic Diversity**

In the Antelope Complex wild horses have been part of the range environment in the Great Basin since contemporary livestock grazing began in the mid 1800's. The wild horses in the Antelope Complex are descendants from horses used by homesteaders, ranchers, and miners. There is some evidence that the Army Remount Service was active in at least part of the area during the early 1900's to the early 1940's. The dominant colors are bay, sorrel, black, brown, buckskin, gray and dun.

Blood samples were collected from 95 horses during the 2001 Antelope Complex gather to develop genetic baseline data (e.g. genetic diversity, historical origins of the herd, unique markers). The samples were analyzed by a geneticist (Cothran, 2002a, 2002b, 2002c and 2004) at the Department of Veterinary Science, University of Kentucky (currently at Texas A&M University) to determine the degree of heterozygosity for the herd. Based on this sampling, past gathers in the Antelope Complex have not resulted in genetic diversity problems and there is no evidence to indicate that the Antelope Complex animals suffer from reduced genetic fitness. These data would be incorporated into a Herd Management Area Plan(s) in the future. Genetics analysis results are available at the Elko and Ely District Offices.

The Antelope, Antelope Valley, and Goshute HMAs are all connected. Although the Spruce-Pequop HMA is not connected to the other three HMAs within the Antelope Complex, there are few barriers to prevent wild horses from moving into the nearby HMAs. Wild horses have been documented moving back and forth from the Spruce-Pequop HMA to the other HMAs within the Antelope Complex. A large amount of

## Antelope Complex Gather Capture Plan and EA

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known movement does occur among these HMAs but no formal research has been completed to determine the amount of movement that does occur. This known movement helps to diversify the wild horse gene pools and contributes to the observed genetic diversity within the herds. Management of the wild horses in these HMAs at the established AML ranges and as an interacting population regardless of boundaries (i.e., as an HMA Complex) will ensure continued genetic diversity and health. Even slight movement helps to diversify and contribute to heterozygosity of the herds. Samples would again be collected during the proposed gather for genetics analysis.

### Summary

Based upon the population inventory information available at this time, the BLM has determined that there are an estimated 1,867 to 2,228 excess wild horses from within the HMAs and approximately 50 from outside the Goshute and Spruce-Pequot HMAs that need to be removed.

The BLM's excess determination is based on a number of factors including, but not limited to:

- A 2010 wild horse population inventory shows that the current wild horse population is significantly over AML, at five times the lower range of AML in the Antelope Complex.
- There are limited water sources available for use by the current wild horse population within the Antelope Complex, resulting in damage to water resources and increasing the potential for an emergency situation.
- In contrast to excess wild horse numbers, livestock use has averaged only 47% of the active permitted use within the Antelope Complex over the past eight years. See Tables 6 and 7 in Section 3.1.7 for more information on permitted and actual livestock use.

### **Direct and Indirect Effects of Alternatives A, B and C**

The WinEquus program, developed by Dr. Steven Jenkins at the University of Nevada, Reno was designed to assist Wild Horse and Burro Specialists model various management options and project possible outcomes for management of wild horses. Population modeling was completed to analyze possible differences that could occur to the wild horse populations among alternatives. See Appendix H for the results of the WinEquus population modeling. One objective of the modeling was to project if the Proposed Action (Alternative A) or any of the alternatives would "crash" the population or cause extremely low population numbers or growth rates. Minimum population levels and growth rates were found to be within reasonable levels and adverse impacts to the population are not likely.

Since 2004, BLM Nevada has gathered just over 26,000 excess animals. Of these, mortality has averaged only 0.5%, which is very low when handling wild animals. Another 0.6% of the animals captured were humanely euthanized due to pre-existing conditions and in accordance with BLM policy. These data affirm that the use of



## Antelope Complex Gather Capture Plan and EA

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helicopters and motorized vehicles has proven to be a safe, humane, effective and practical means for the gather and removal of excess wild horses and burros from the public lands. BLM also avoids gathering wild horses by helicopter from March 1 through June 30, which represents the six weeks prior to and after the peak of foaling.

Over the past 35 years, various impacts to wild horses from gather activities have been observed. Individual, direct impacts to wild horses include handling stress associated with the roundup, capture, sorting, animal handling, and transportation of the animals. The intensity of these impacts varies by individual animal, and is indicated by behaviors ranging from nervous agitation to physical distress. The wild horse is a very adaptable animal and assimilates into the environment with new herd members quite easily. Observations made following the completion of gathers shows that captured wild horses acclimate quickly to the holding corrals and become accustomed to water tanks and hay, as well as human presence.

Direct impacts include injuries sustained by wild horses during gathers, such as nicks and scrapes to legs, face, or body from brush or tree limbs while being herded to the gather corrals by the helicopter. Rarely, wild horses will encounter barbed wire fences and will receive wire cuts. These injuries are not fatal and can be treated with medical spray at the holding corrals until a veterinarian can examine the animal. Occasionally, broken legs from stepping into a rodent or badger hole may occur while being herded with a helicopter.

Most injuries are sustained once the wild horse has been captured and is either within the gather corrals or holding corrals, or during transport between the facilities and during sorting. These injuries result from kicks and bites, and from animals making contact with corral panels or gates. Transport and sorting is completed as quickly and safely as possible to reduce the occurrence of fighting and to move the wild horses into the large holding pens where they can settle in with hay and water. Injuries received during transport and sorting consist of superficial wounds of the rump, face, or legs. Despite precautions, occasionally a wild horse will rear up or make contact with panels hard enough to sustain a fatal neck break, though such incidents are rare. There is no way to reasonably predict any of these types of injuries. On many gathers, no wild horses are injured or die. On some gathers, due to the genetic background of the wild horses, they are not as calm and injuries are more frequent. Overall, however, injuries and death are not frequent and usually average less than 0.5% of gathered horses.

Though some members of the public have expressed the view that helicopter gathers are not humane, most injuries occur once the wild horses are captured, and similar injuries would also be sustained if horses were captured through bait trapping or other capture methods, as the animals would still need to be sorted, aged, transported and otherwise handled. Serious injuries requiring euthanasia could occur in less than 5 wild horses per every 1,000 captured based on prior gather statistics.

### Temporary Holding Facilities During Gathers

Wild horses gathered would be transported from the gather sites to a temporary holding corral within the Antelope Complex in goose-neck trailers. Holding facilities and gather

## Antelope Complex Gather Capture Plan and EA

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sites have historically been located on private lands due to road access and available water (i.e. private land around Dolly Varden spring has been used for a holding site since the mid 1980's) and may be located on private lands again during this proposed gather. At the temporary holding corral, wild horses would be sorted into different pens based on sex. The horses would be aged and fed good quality hay and water. Wild horses selected for return to the HMAs after the application of fertility control and/or near the end of the gather operation would be kept in pens separate from horses that would be removed. Mares and their un-weaned foals would be kept in pens together.

### Transport, Short Term Holding, and Adoption Preparation

About 1,917 to 2,278 excess horses would be removed. Wild horses removed from the range would be transported to the receiving short-term holding facility in a goose-neck stock trailer or straight-deck semi-tractor trailers. Animals would be transported from the capture/temporary holding corrals to the designated BLM short-term holding corral facility(s). From there, they would be made available for adoption or sale to qualified individuals or would be sent to long-term pastures (LTPs).

Vehicles are inspected by the BLM Contracting Officer Representative (COR) and Project Inspectors (PIs) prior to use to ensure wild horses can be safely transported and that the interior of the vehicle is in a sanitary condition. Wild horses are segregated by age and sex and loaded into separate compartments to the extent possible. A small number of mares may be shipped with foals or smaller, younger, and/or weaker mixed sex groups of horses may be shipped together. Transportation of recently captured wild horses is generally less than approximately 8 hours. During transport, potential impacts to individual horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to be seriously injured or die during transport.

Upon arrival at the short term holding facility, recently captured wild horses are off-loaded by compartment and placed in holding pens where they are fed good quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the short-term holding facility, a veterinarian examines each load of horses and provides recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club feet, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA). Wild horses in very thin condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries as indicated. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to feed. Some of these animals are in such poor condition that it is unlikely they would have survived if left on the range. Similarly, some pregnant mares may lose their pregnancies. Every effort is taken to help the mare make a quiet, low stress transition to captivity and domestic feed to minimize the risk of miscarriage or death.

## Antelope Complex Gather Capture Plan and EA

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After recently captured wild horses have transitioned to their new environment, they are prepared for adoption, sale or long-term holding. Preparation involves freeze-marking the animals with a unique identification number, drawing a blood sample to test for equine infectious anemia, vaccination against common diseases, castration, and deworming. During the preparation process, potential impacts to wild horses are similar to those that can occur during handling and transportation. Serious injuries and deaths from injuries during the preparation process are rare, but can occur.

At short-term corral facilities, a minimum of 700 square feet is provided per animal. Mortality at short-term holding facilities averages approximately 5% per year (GAO-09-77, Page 51), and includes animals euthanized due to a pre-existing condition; animals in extremely poor condition; animals that are injured and would not recover; animals which are unable to transition to feed; and animals which are seriously injured or accidentally die during sorting, handling, or preparation.

### Adoption or Sale With Limitations and Long Term Pastures

Adoption applicants are required to have at least a 400 square foot corral with panels that are at least six feet tall for horses over 18 months of age. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the horse for one year and the horse and the facilities are inspected to ensure the adopter is complying with the BLM's requirements. After one year, the adopter may take title to the horse after an inspection from a humane official, veterinarian, or other individual approved by the authorized officer, at which point the horse becomes the property of the adopter. Adoptions are conducted in accordance with 43 CFR § 4750.

Potential buyers must fill out an application and be pre-approved before they may buy a wild horse. A sale-eligible wild horse is any animal that is more than 10 years old; or has been offered unsuccessfully for adoption three times. The application also specifies that buyers are not to re-sell the animal to slaughter buyers or anyone who would sell the animal to a commercial processing plant. Sales of wild horses are conducted in accordance with Bureau policy.

Between 2007 and 2009, nearly 62% of excess wild horses or burros removed from the public lands were adopted and about 8% were sold with limitation (to good homes) to qualified individuals. Animals 5 years of age and older are generally transported to LTPs. Each LTP is subject to a separate environmental analysis and decision making process. Animals in LTPs remain available for adoption or sale (with limitations) to individuals interested in acquiring a larger number of animals and who can provide the animals with a good home. The BLM has maintained LTPs in the Midwest for over 20 years.

Potential impacts to wild horses from their transport to adoption, sale or LTP are similar to those previously described. One difference is that when shipping wild horses for adoption, sale or LTP, animals may be transported for a maximum of 24 hours. Immediately prior to transportation, and after every 18-24 hours of transportation, animals are offloaded and provided a minimum of 8 hours on-the-ground rest. During

## Antelope Complex Gather Capture Plan and EA

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the rest period, each animal is provided access to unlimited amounts of clean water and about 25 pounds of good quality hay per horse with adequate bunk space to allow all animals to eat at one time. Most animals are not shipped more than 18 hours before they are rested. The rest period may be waived in situations where the travel time exceeds the 24-hour limit by just a few hours and the stress of offloading and reloading is likely to be greater than the stress involved in the additional period of uninterrupted travel.

LTPs are designed to provide excess wild horses with humane, life-long care in a natural setting off the public rangelands. There wild horses are maintained in grassland pastures large enough to allow free-roaming behavior and with the forage, water, and shelter necessary to sustain them in good condition. About 22,700 wild horses, that are in excess of the existing adoption or sale demand (because of age or other factors), are currently located on private land pastures in Iowa, Kansas, Oklahoma, and South Dakota. Located in mid or tall grass prairie regions of the United States, these LTP are highly productive grasslands as compared to more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 8-10 acres per animal). The majority of these animals are older in age.

Mares and castrated stallions (geldings) are segregated into separate pastures except one facility where geldings and mares coexist. No reproduction occurs in the long-term grassland pastures, but foals are born to mares that were pregnant when they were removed from the range and placed onto the LTP. These foals are gathered and weaned when they reach about 6-10 months of age and are then shipped to short-term facilities where they are made available for adoption. Handling of wild horses in LTP by humans is minimized to the extent possible although regular on-the-ground observation and weekly counts of the wild horses to ascertain their numbers, well-being, and safety are conducted. A very small percentage of the animals may be humanely euthanized if they are in very thin condition and are not expected to improve to a Body Condition Score (BCS) of 3 or greater due to age or other factors. Natural mortality of wild horses in LTP averages approximately 8% per year, but can be higher or lower depending on the average age of the horses pastured there (GAO-09-77, Page 52). The savings to the American taxpayer which results from contracting for LTP averages about \$4.45 per horse per day as compared with maintaining the animals in short-term holding facilities.

### Euthanasia and Sale Without Limitation

While humane euthanasia and sale without limitation of healthy horses for which there is no adoption demand is authorized under the WFRHBA, Congress prohibited the use of appropriated funds between 1987 and 2004 and again in 2010 for this purpose. It is unknown if a similar limitation will be placed on the use of FY2011 appropriated funds

### Wild Horses Remaining or Released Into the Antelope Complex Following Gather

Under the Proposed Action and Alternatives B and C, the post-gather population of wild horses would be about 427 wild horses, which is the low range of the AML for the Antelope Complex. Reducing population size would also ensure that the remaining wild horses are healthy and vigorous, and not at risk of death or suffering from starvation due

## Antelope Complex Gather Capture Plan and EA

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to insufficient habitat coupled with the effects of frequent drought (lack of forage and water).

The wild horses that are not captured may be temporarily disturbed and move into another area within the Antelope Complex during the gather operations. With the exception of changes to herd demographics, direct population wide impacts have proven, over the last 20 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of when captured wild horses are released back into the Antelope Complex. No observable effects associated with these impacts would be expected within one month of release, except for a heightened awareness of human presence.

As a result of lower density of wild horses across the Antelope Complex following the removal of excess horses, competition for resources would be reduced, allowing wild horses to utilize preferred, quality habitat. Confrontations between stallions would also become less frequent, as would fighting among wild horse bands at water sources. Achieving the AMLs and improving the overall health and fitness of wild horses could also increase foaling rates and foaling survival rates over the current conditions.

The primary effects to the wild horse population that would be directly related to this proposed gather would be to herd population dynamics, age structure or sex ratio, and subsequently to the growth rates and population size over time.

The remaining wild horses not captured would maintain their social structure and herd demographics (age and sex ratios). No observable effects to the remaining population associated with the gather impacts would be expected except a heightened shyness toward human contact.

Impacts to the rangeland as a result of the current overpopulation of wild horses would be reduced under the three gather and removal alternatives. Fighting among stud horses would decrease since they would protect their position at water sources less frequently; injuries and death to all age classes of animals would also be expected to be reduced as competition for limited forage and water resources is decreased.

Indirect individual impacts are those impacts which occur to individual wild horses after the initial stress event, and may include spontaneous abortions in mares, and increased social displacement and conflict in studs. These impacts, like direct individual impacts, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief skirmish which occurs among older studs following sorting and release into the stud pen, which lasts less than two minutes and ends when one stud retreats. Traumatic injuries usually do not result from these conflicts. These injuries typically involve a bite and/or kicking with bruises which don't break the skin. Like direct individual impacts, the frequency of occurrence of these impacts among a population varies with the individual.



## Antelope Complex Gather Capture Plan and EA

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During summer months, foals are typically small, and average 4 months old. Newborn foals are often gathered, and many foals are too young to wean. By fall and winter, most foals are of good body size and sufficient age to be easily weaned. Fall and winter time-frames are much less stressful to foals than summer gathers. Not only are young foals in summer months more prone to dehydration and complications from heat stress, the handling, sorting and transport is a stress to the young animals and increases the chance for them to be rejected by their mothers. To reduce any potential heat related issues, summer gather activities are limited to periods of the day when temperatures are below 90 degrees Fahrenheit. By gathering wild horses in the Antelope Complex during the winter, any potential stress associated with summer gathers can be avoided.

A few foals may be orphaned during gathers. This may occur due to:

- The mare rejects the foal. This occurs most often with young mothers or very young foals,
- The foal and mother become separated during sorting and cannot be matched,
- The mare dies or must be humanely euthanized during the gather,
- The foal is ill, weak, or needs immediate special care that requires removal from the mother,
- The mother does not produce enough milk to support the foal.

Oftentimes, foals are gathered that were already orphans on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Orphans encountered during gathers are cared for promptly and rarely die or have to be euthanized.

Nearly all foals that would be gathered during the winter season would be about seven months of age and older and would most likely be ready for weaned from their mothers. In private industry, domestic horses are normally weaned between four and six months of age.

Winter is often the preferred time to gather horses, particularly for the Antelope Complex due to the terrain and elevations that make it difficult to gather wild horses from the higher elevations of the Antelope Complex during summer months. Winter gathers typically result in less stress to wild horses as the cold and snow does not affect horses during the gather to the degree that heat and dust would during summer gathers. Wild horses are able to travel farther and over terrain that is more difficult during winter gathers provided snow does not cover the ground. Water intake requirements are less during winter months, making this timeframe less apt to cause distress from heat exhaustion. During summer months, horses may be travelling long distances between water and desired forage areas, and may therefore be more easily dehydrated during gathers.

Oftentimes, wild horses are located at the highest elevations during the summer months, and must travel over steep terrain to reach the gather sites. Dense tree cover further increases the difficulty of gathering wild horses during summer months. Wild horses are often located in lower elevations, in less steep terrain during winter gathers due to snow

## Antelope Complex Gather Capture Plan and EA

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cover in the higher elevations. Subsequently, the horses are closer to the potential gather sites, and would need to maneuver less difficult terrain in many cases. However, snow cover can increase fatigue and stress during winter gathers. The helicopter pilot allows horses to travel slowly at their own pace. The contractor may plow trails in the snow leading to the gather sites to make it easier for horses to travel to the gather site. As much as possible, gather activities would be limited to periods of time when temperatures are above 0 degrees Fahrenheit.

Through the capture and sorting process, wild horses are examined for health, injury and other defects. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. BLM Euthanasia Policy IM-2009-041 is used as a guide to determine if animals meet the criteria and should be euthanized. Animals that are euthanized for non-gather related reasons include those with old injuries (broken hip, leg) that have caused the animal to suffer from pain or which prevent them from being able to travel or maintain body condition; old animals that have lived a successful life on the range, but now have few teeth remaining, are in poor body condition, or are weak from old age; and wild horses that have congenital (genetic) or serious physical defects such as club foot, or sway back and should not be returned to the range.

### **Alternative D**

Direct impacts include injuries sustained by wild horses during gathers, such as nicks and scrapes to legs, face, or body from brush or tree limbs while being herded to the gather corrals by the helicopter. Rarely, wild horses will encounter barbed wire fences and will receive wire cuts. These injuries are not fatal and can be treated with medical spray at the holding corrals until a veterinarian can examine the animal. During the actual herding of wild horses with a helicopter, injuries are rare, and consist of scrapes and scratches from brush, or on rare occasions broken legs from wild horses stepping into a rodent or badger hole.

Most injuries are sustained once the wild horse has been captured and is either within the gather corrals or holding corrals, or during transport between the facilities and during sorting. These injuries result from kicks and bites, and from animals making contact with corral panels or gates. Transport and sorting is completed as quickly and safely as possible to reduce the occurrence of fighting and to move the wild horses into the large holding pens where they can settle in with hay and water. Injuries received during transport and sorting consist of superficial wounds of the rump, face, or legs. Despite precautions, occasionally a wild horse will rear up or make contact with panels hard enough to sustain a fatal neck break, though such incidents are rare. There is no way to reasonably predict any of these types of injuries. On many gathers, no wild horses are injured or die. On some gathers, due to the genetic background of the wild horses, they are not as calm and injuries are more frequent. Overall, however, injuries and death are not frequent and usually average less than 0.5% of gathered horses.

## Antelope Complex Gather Capture Plan and EA

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Though some members of the public have expressed the view that helicopter gathers are not humane, most injuries occur once the wild horses are captured, and similar injuries would also be sustained if horses were captured through bait trapping, as the animals would still need to be sorted, aged, transported and otherwise handled. Serious injuries requiring euthanasia could occur in less than 5 wild horses per every 1000 captured based on prior gather statistics.

### Temporary Holding Facilities During Gathers

Impacts would be the same as outlined above for Alternatives A, B, and C.

### Transport, Short Term Holding, and Adoption Preparation

About 1,383 excess horses would be removed from the Antelope Complex outside of the Spruce Allotment; about 404 excess horses would be removed from within the Spruce Allotment. Additional impacts would be the same as outlined for Alternatives A, B, and C.

### Adoption or Sale With Limitations and Long Term Pastures

Impacts would be the same as outlined above for Alternatives A, B, and C.

### Euthanasia and Sale without Limitation

Impacts would be the same as outlined above for Alternatives A, B, and C.

### Wild Horses Remaining or Released into the Antelope Complex following Gather

Under Alternative D, the post-gather population of wild horses would be about 605 wild horses within the Spruce Allotment boundary and approximately 313 wild horses in the Antelope Complex outside of the Spruce Allotment. This area would still see competition among horses for habitat, and especially for limited water resources. Stallions would continue to fight at water sources and pregnant mares and foals would be expected to be pushed away from limited rangeland resources by aggressive stallions.

The area outside of the Spruce Allotment would be at the low range of the AML. Reducing population size would also ensure that the remaining wild horses are healthy and vigorous, and at a reduced risk of death or suffering from starvation due to insufficient habitat coupled with the effects of frequent drought (lack of forage and water).

The wild horses that are not captured may be temporarily disturbed and move into another area within the Antelope Complex during the gather operations. With the exception of changes to herd demographics, direct population wide impacts have proven, over the last 20 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of when wild horses are released back into the Antelope Complex. No observable effects associated with these impacts would be expected within one month of release, except for a heightened awareness of human presence.

As a result of lower density of wild horses in the area of the Antelope Complex gathered to the low end of AML following the removal of excess horses, competition for resources

## Antelope Complex Gather Capture Plan and EA

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would be reduced, allowing wild horses to utilize preferred, quality habitat. Confrontations between stallions would also become less frequent, as would fighting among wild horse bands at water sources. Achieving the AMLs and improving the overall health and fitness of wild horses could also increase foaling rates and foaling survival rates over the current conditions.

The primary effects to the wild horse population that would be directly related to this proposed gather would be to herd population dynamics, age structure or sex ratio, and subsequently to the growth rates and population size over time.

The remaining wild horses not captured would maintain their social structure and herd demographics (age and sex ratios). No observable effects to the remaining population associated with the gather impacts would be expected except a heightened shyness toward human contact.

Impacts to the rangeland as a result of the current overpopulation of wild horses would be reduced.

Indirect individual impacts are those impacts which occur to individual wild horses after the initial stress event, and may include spontaneous abortions in mares, and increased social displacement and conflict in studs. These impacts, like direct individual impacts, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief skirmish which occurs among older studs following sorting and release into the stud pen, which lasts less than two minutes and ends when one stud retreats. Traumatic injuries usually do not result from these conflicts. These injuries typically involve a bite and/or kicking with bruises which don't break the skin. Like direct individual impacts, the frequency of occurrence of these impacts among a population varies with the individual.

During summer months, foals are typically small, and average 4 months old. Newborn foals are often gathered, and many foals are too young to wean. By fall and winter, most foals are of good body size and sufficient age to be easily weaned. Fall and winter time-frames are much less stressful to foals than summer gathers. Not only are young foals in summer months more prone to dehydration and complications from heat stress, the handling, sorting and transport is a stress to the young animals and increases the chance for them to be rejected by their mothers. To reduce any potential heat related issues, summer gather activities are limited to periods of the day when temperatures are below 90 degrees Fahrenheit. By gathering wild horses in the Antelope Complex during the winter, potential stress associated with summer gathers can be avoided.

A few foals may be orphaned during gathers. This may occur due to:

- The mare rejects the foal. This occurs most often with young mothers or very young foals,
- The foal and mother become separated during sorting and cannot be matched,
- The mare dies or must be humanely euthanized during the gather,

## Antelope Complex Gather Capture Plan and EA

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- The foal is ill, weak, or needs immediate special care that requires removal from the mother,
- The mother does not produce enough milk to support the foal.

Oftentimes, foals are gathered that were already orphans on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Orphans encountered during gathers are cared for promptly and rarely die or have to be euthanized.

Nearly all foals that would be gathered during the winter season would be about seven months of age and older and would be ready for weaning from their mothers. In private industry, domestic horses are normally weaned between four and six months of age.

Winter is often the preferred time to gather horses, particularly for the Antelope Complex due to the terrain and elevations that make it difficult to gather wild horses from the higher elevations of the Antelope Complex during summer months. Winter gathers typically result in less stress to wild horses as the cold and snow does not affect horses during the gather to the degree that heat and dust would during summer gathers. Wild horses are able to travel farther and over terrain that is more difficult during winter gathers provided snow does not cover the ground. Water intake requirements are less during winter months, making this timeframe less apt to cause distress from heat exhaustion. During summer months, horses may be travelling long distances between water and desired forage areas, and may therefore be more easily dehydrated during gathers.

Oftentimes, wild horses are located at the highest elevations during the summer months, and must travel over steep terrain to reach the gather sites. Dense tree cover further increases the difficulty of gathering wild horses during summer months. Wild horses are often located in lower elevations, in less steep terrain during winter gathers due to snow cover in the higher elevations. Subsequently, the horses are closer to the potential gather sites, and would need to maneuver less difficult terrain in many cases. However, snow cover can increase fatigue and stress during winter gathers. The helicopter pilot allows horses to travel slowly at their own pace. The contractor may plow trails in the snow leading to the gather sites to make it easier for horses to travel to the gather site. As much as possible, gather activities would be limited to periods of time when temperatures are above 0 degrees Fahrenheit.

Through the capture and sorting process, wild horses are examined for health, injury and other defects. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. BLM Euthanasia Policy IM-2009-041 is used as a guide to determine if animals meet the criteria and should be euthanized. Animals that are euthanized for non-gather related reasons include those with old injuries (broken hip, leg) that have caused the animal to suffer from pain or which prevent them from being able to travel or maintain body condition; old animals that have lived a successful life on the range, but now have few teeth remaining, are in poor body condition, or are weak



## Antelope Complex Gather Capture Plan and EA

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from old age; and wild horses that have congenital (genetic) or serious physical defects such as club foot, or sway back and should not be returned to the range.

The current population of wild horses within the Spruce Allotment would not be reduced to the established AML for the allotment of 114 to 244 wild horses. The current population of wild horses in the Spruce Allotment equates to over 12,100 AUMs, which exceeds the identified carrying capacity of 2,928 AUMs (high end of the wild horse AML for the Spruce Allotment). Wild horses require more forage supply as they use the forage less efficiently than cattle (Holechek, 1988).

Removal of approximately 400 excess wild horses would still leave approximately 600 wild horses on the Spruce Allotment which would exceed the AMLs established for the HMAs falling within the Spruce Allotment.

Based on current studies, a horse requires 12 to 15 gallons of water per horse per day on the range (Stoddart, Laurence A., et al, 1975 and USDA Forest Service Technology Development Center, 1989, and John F. Valentine, 1980). Leaving approximately 600 wild horses on the Spruce Allotment would continue to exceed the limited water resources in and adjacent to the Spruce Allotment. The limited perennial water resources within the Spruce Allotment do not have the capacity to provide adequate dependable water for a wild horse population of 600 head.

Wild horses would need to be gathered, treated and released every three years to maintain approximately 600 wild horses on the Spruce Allotment. This would still not comply with the WFRHBA, the Wells RMP, and the Standards and Guidelines for Rangeland Health.

### **Alternative E**

All impacts from this alternative would be indirect. The current population of wild horses on the Antelope Complex equates to over 32,460 AUMs, which exceeds the identified carrying capacity of 9,456 AUMs (high end of AMLs) for wild horses established through prior decisions and land-use planning. Wild horses require more forage supply as they use the forage less efficiently than cattle (Holechek, 1988). Without a gather to control the population, these figures could increase to consumption of nearly 46,739 AUMs by wild horses within two years, which would be five times the Antelope Complex carrying capacity established for wild horses.

Based on current studies, a horse requires 12 to 15 gallons of water per horse per day on the range (Stoddart, Laurence A., et al, 1975 and USDA Forest Service Technology Development Center, 1989, John Valentine, 1980). This equates to 32,460 to 40,575 gallons of water per day required by the current population of wild horses within the Antelope Complex. The limited water resources in the Antelope Complex do not have the capacity to provide adequate dependable water for the current population. With the limited perennial waters in the Antelope Complex it is likely that emergency gathers

## Antelope Complex Gather Capture Plan and EA

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would need to be conducted in the future if the population is allowed to continue to increase.

Under the No Action Alternative, wild horses would not be removed and the AMLs would not be achieved in the Antelope Complex. Individual horses as well as the herd would not be subject to any direct or indirect impacts which may result from the gather operations as described for the Proposed Action. However, the current population of 2,705 wild horses would continue to increase at rates of 18 to 20 percent per year. Without a gather and removal now, the wild horse population in the Antelope Complex would exceed 5,000 head within 4 years based on the annual population growth rate. According to the population modeling results, the highest average expected population within the Antelope Complex at the end of 10 years (if no wild horses are removed) would approximate 11,814 wild horses at one time.

Because wild horses are a long-lived species with documented survival rates exceeding 92% for all age classes, predation and disease do not substantially regulate wild horse population levels. Throughout the Antelope Complex there are few predators that exist to control wild horse populations. Some mountain lion predation may occur, but it is not believed to be substantial. Coyotes are not prone to prey on wild horses unless the horses are young, or extremely weak. Other predators such as wolf or bear do not inhabit the area. Wild horses in general are very resilient and adaptable animals with a metabolism that has evolved to allow them to survive and thrive in poor quality habitat (compared to their domestic counterparts). These wild animals are typically in top fitness, have strong bones and hooves and rarely succumb to ailments that plague domestic horses. Wild horses typically do not begin to show signs of body condition decline until the habitat components are severely deficient. Once the decline begins, their health deteriorates rapidly. As a result, wild horse numbers would be expected to continue to increase, which in turn would continue to exceed the carrying capacity of the range.

Individual horses would be at risk of death by starvation and lack of water. Competition among wild horses for the available forage and water would increase, affecting mares and foals most severely. Social stress would increase. Fighting among stud horses would increase as they protect their position at scarce water sources. As populations continue to increase beyond the capacity of the habitat, more bands of wild horses would be expected to leave the boundaries of the HMAs seeking forage and water. This would in turn impact range conditions and other range users (i.e., native wildlife) outside the HMAs boundaries.

While some members of the public have advocated “letting nature take its course,” allowing horses to die of dehydration and starvation would be inhumane treatment and would be contrary to the WFRHBA, which mandates removal of excess wild horses. The damage to rangeland resources that results from excess numbers of wild horses is also contrary to the WFRHBA, which mandates the Bureau to “*protect the range from the deterioration associated with overpopulation,*” “*remove excess animals from the range so as to achieve appropriate management levels,*” and “*to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area.*”

## Antelope Complex Gather Capture Plan and EA

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Federal Regulations at Title 43 CFR § 4700.0-6 (a) state, “*Wild horses shall be managed as self- sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat*” (emphasis added). Allowing excess wild horses to remain un-gathered would be inconsistent with the mandates of the WFRHBA and implementing regulations.

It is anticipated that emergency removals would be necessary in the future under this No Action Alternative to prevent individual animals from suffering or death as a result of insufficient water if excess horses are not removed. These emergency removals could occur as early as this winter season if the area experiences normal or above-normal snow depths. There is also a high likelihood that emergency actions would be needed beyond the winter season if the current dry conditions persist through the upcoming summer. During emergency conditions, competition for available forage and water resources is heightened and generally impact the older and youngest horses as well as lactating mares first. These groups would experience significant weight loss and diminished health, which could result in prolonged suffering and their eventual death. If emergency actions are not taken (prior to or in response to these events), the overall population could be affected by severely skewed sex ratios towards stallions (generally the strongest and healthiest portion of the population) and a significantly altered age structure. In addition, habitat resources would be over-utilized and progress toward achieving rangeland health standards would not be possible.

### **3.1.2 Water Resources**

#### **Affected Environment**

The scarce water resources in the Antelope Complex include springs/seeps (springs), ephemeral/intermittent streams, ephemeral ponds, and water wells. The Antelope Complex is within the terminal basins of Independence Valley, Goshute Valley, Deep Creek Valley, Steptoe Valley, Currie, Butte Valley, Clover Valley, North Spring Valley, Antelope Valley and Pilot Creek Valley. There are some small intermittent streams associated with large springs, but these do not flow more than several hundred feet. There are no perennial streams within the Antelope Complex. Water resource inventory data collected from 1979 to 2009 along with Proper Functioning Condition Assessments provide much of the following information regarding flow, condition, and other characteristics of these water resources. Detailed water resource information is only available and summarized for water sources on the public lands.

Discharge from springs/seeps ranges from no overland flows to a maximum of 12 gallons per minute (gpm). Spring flow varies by season and yearly, reflecting climatic variables. Most listed springs in the Antelope Complex have flows that drop to nearly zero during dry conditions. Most springs discharge less than one gpm. These discharge measurements are not a quantification of total water produced by the spring since a portion or all water coming from a spring is evaporated, utilized by nearby vegetation, or seeps into groundwater near the spring source. A summary of flow rates for public land springs is presented in Appendix I. Springs with no discharge rate shown are sources that

## Antelope Complex Gather Capture Plan and EA

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express indications of a spring source as evidenced by riparian vegetation and/or surface ponding, but do not have any measurable overland flow (see pictures below of some springs with limited flows).



Unnamed spring in Dolly Varden Range. Flow measured at 6.5 gallons/hour (August 2010). This is part of unit F-1 (not part of the livestock grazing permit) in the Spruce Mountain Allotment. No livestock AUMs are authorized in this portion of Dolly Varden Range.



Dead Cedar Spring. Spring flow measured at 1 gph (.0015 gpm) (August 2010). (Livestock season of use is from 11/1 to 4/15.



## Antelope Complex Gather Capture Plan and EA

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Many springs within the Antelope Complex are developed to make surface water available for wild horses, livestock, and/or wildlife. There are also numerous undeveloped springs, many of which discharge surface water which is also available for utilization. Spring development was usually accomplished by piping a portion of spring water a short distance from the source into troughs or by constructing an earthen dam for water collection. Spring developments where water is piped longer distances are listed as “conveyance” in Appendix I. The fraction of total spring water made available by the diversion or conveyance depends upon the type and extent of the development as well as spring source topography and substrate. For example, the Mud Spring development located in the Goshute Mountains diverts a small portion of available water while the nearby Sheep Camp Spring diverts nearly all available water (photo MD1 and MD2).



Photo MD1. Sheep Camp Spring, Goshute Mountains, spring development diverting most of available flow to a trough for wildlife and wild horses. Livestock season of use is from 11/1 to 4/30.

## Antelope Complex Gather Capture Plan and EA

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Photo MD2. Mud Spring, Goshute Mountains, Spring development diverting a small portion of available flow. When authorized, the livestock season of use is 11/-12/1 and from 4/1-4/30; however, grazing use is not authorized for 2010 grazing season.

There are no known water contaminations within the Antelope Complex that have resulted in an inability to use water resources for their known beneficial uses (typically wildlife, livestock and wild horse use). Some water quality data have been collected, but these data are insufficient to determine trends at local springs and do not include any nutrient or bacteria data. For purposes of evaluation, riparian condition assessments can be used to determine whether and to what extent water quality is under anthropogenic influence. In general, a spring is more likely to have water quality issues if its riparian area has been rated as non-functional, than if it is rated at proper functioning condition. A summary of riparian condition assessments is presented in the Riparian/Wetlands section of this document. The results of riparian condition assessments are included in Appendix I. Other anecdotal data such as presence of moss, or lack of vegetation at a spring source could indicate problems with water quality. While there have been some recorded observations of high water temperature, moss, and sedimentation for springs in the Antelope Complex, this has not resulted in any contamination that would preclude use by wild horses, livestock, and wildlife. The Nevada Division of Environmental Protection has not listed any of the water bodies within the Antelope Complex on the State of Nevada List of Impaired Water Bodies (Section 303(d) of the Clean Water Act).

Quantity of available water within the Antelope Complex is limited and heavy use by wild horses likely results in less available water for other beneficial uses such as riparian vegetation and wildlife. Most springs within the complex have little flow and most available flow is consumed directly by wild horses. Impacts to beneficial users of water resources have not been quantified.

## Antelope Complex Gather Capture Plan and EA

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There are an estimated 22 operating water wells on public land within and near the Antelope Complex that provide water to wild horses, livestock and/or wildlife. These wells are operated at the discretion and expense of the various livestock grazing permittees for allotments that intersect the Antelope Complex. Locations of these wells are shown on Maps 6, 7, 8 and 9.

### **Direct and Indirect Effects of Alternatives**

Use of spring sources by wild horses can impact spring water quality directly through physical disturbance, as well as bacterial, nutrient, and sediment loading and indirectly through impacts to riparian health as described in the riparian/wetlands section of this document. These impacts are most likely to occur on undeveloped springs with available surface water. Livestock and especially wild horses tend to spend a lot of time at spring sources resulting in direct negative impacts to water quality and riparian health. On springs with low flow, wild horses will sometimes attempt to access additional water by digging at the source with their hooves (see photos MD3 - MD6). This action has the potential to break through impermeable soil layers that are vital to the ability of the spring to discharge water at the surface. Less water could be available at the surface as a result. These physical impacts are more likely to occur at springs on hillsides than those located lower on the slope.

### **Proposed Action and Alternatives B and C**

Removal of wild horses would reduce negative impacts to water quality and may result in some short term improvement. Wild horse impacts would decrease but there would continue to be heavy pressure on water resources. Decreased impacts would only affect water quality in the short term since increases in wild horse population over the next several years would result in the same level of impacts that has resulted in the current condition. There would be no substantive direct impacts to water quality.

### **Alternative D and E (No Action)**

Leaving excess wild horses in and adjacent to the HMAs would increase degradation to water quality as wild horse populations continue to increase each year that a gather is postponed (Alternative E) or wild horse numbers remain above AML (Alternatives D and E). Water quality would remain in a degraded state on heavily grazed spring sources and as a result of the continued removal of standing vegetation, compaction, and deposition of animal wastes from wild horses. The increasing population of wild horses would exacerbate use on existing limited waters and compound impacts described here.



# Antelope Complex Gather Capture Plan and EA

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## 3.1.3 Soils

### Affected Environment

Soils within the Antelope Complex are Aridisols that vary in depth, texture, erosion potential, and other characteristics based upon several soil forming factors. These soils typically have a mesic or frigid temperature regime and aridic soil moisture regime. Most are well drained, are either moderately deep or very deep and have a coarse surface texture ranging from silt loam to cobbly loam. Detailed information for soils within these allotments can be found in the Soil Survey of Elko County, Southeast Part 1 and White Pine County, Nevada, East Part 1.

Detailed information for these soils can be found in applicable USDA soil survey publications and be found at:

<http://websoilsurvey.nrcs.usda.gov/app/homepage/htm>

Biological soil crusts are likely to be present within the Antelope Complex. Presence of these crusts increases soil cohesiveness and reduces the hazard of erosion by wind and water. The extent and influence of biological soil crusts within the Antelope Complex is not known.

Monitoring of soil quality within the Antelope Complex has not been completed, but due to the large area and many uses it can be assumed that a wide variety of soil quality conditions exist. Soil quality in the Antelope Complex is affected by a variety of land uses including livestock grazing, wild horse use, and vehicular travel. Impacts from wild horses and livestock are typically concentrated at and between water resources. (See pictures below.)

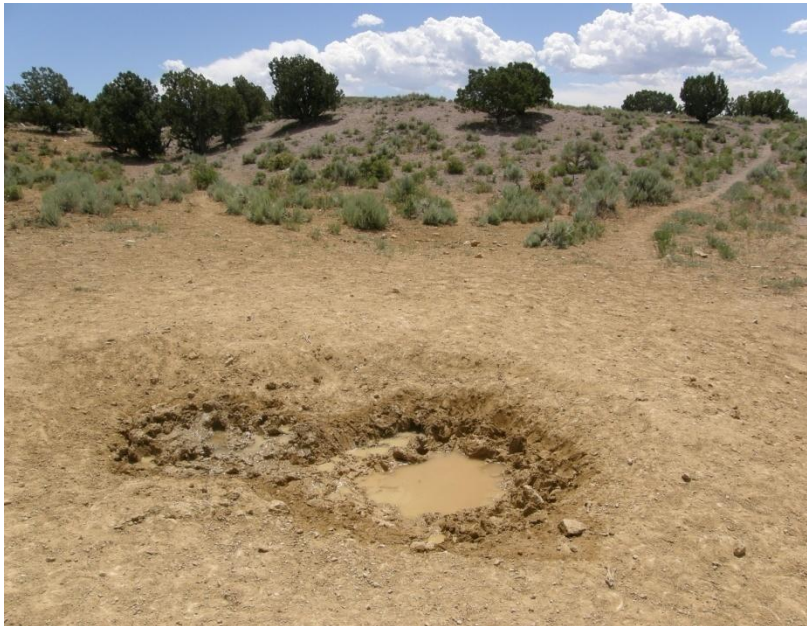




## Antelope Complex Gather Capture Plan and EA

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Impacts to soils by wild horses near Deer Spring conveyance (October 2009). Livestock season of use is from 11/1-5/15.



Impacts to soils by wild horses near Ayarbe Spring conveyance (July 2010). Livestock season of use is 11/1-5/15.



Impacts to soils by wild horses near Dolly Varden Spring (private land) (June 2010).

Impacts from vehicular use are concentrated near existing roads and race areas near the Goshute Mountains. Trailing and hoof action by wild horses has accelerated erosion

# Antelope Complex Gather Capture Plan and EA

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especially following intense storms or snow melt. Aerial monitoring indicates heavy and increasing trailing by wild horses between limited water sources and foraging areas. Heavy wild horse utilization and trailing are occurring in the Antelope Complex and are decreasing vegetative cover, particularly in areas of water sources, resulting in increased compaction which increases run off and soil erosion and decreases soil productivity.

## **Direct and Indirect Effects of the Alternatives**

### **Proposed Action and Alternatives B and C**

Direct impacts associated with the action alternatives would consist of disturbance to soil surfaces immediately in and around the temporary gather site(s) and holding facilities. Impacts would be created by vehicle traffic and hoof action as a result of concentrating horses and could be locally high in the immediate vicinity of the gather site(s) and holding facilities. Generally, these sites would be small (less than one half acre) in size. Any impacts would remain site specific and isolated in nature. Impacts would be minimal as herding and gathering would have a short-term duration (typically only a few days at any one site).

In addition, most gather sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, they are located near or on roads, pullouts, water haul sites or other flat areas, which have been previously disturbed. These common practices would minimize the long-term effects of these impacts.

Implementation of the proposed action and Alternatives B and C would reduce the current wild horse population. Reduced concentrations of wild horses would contribute to reducing soil erosion. This reduction would be most notable and important in the vicinity of water resources with high levels of disturbance and bare ground.

### **Alternative D**

Direct impacts associated with Alternative D would consist of disturbance to soil surfaces immediately in and around the temporary gather site(s) and holding facilities. Impacts would be created by vehicle traffic and hoof action as a result of concentrating horses and could be locally high in the immediate vicinity of the gather site(s) and holding facilities. Generally, these sites would be small (less than one half acre) in size. Any impacts would remain site specific and isolated in nature. Impacts would be minimal as herding and gathering would have a short-term duration (typically only a few days at any one site).

In addition, most gather sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, they are located near or on roads, pullouts, water haul sites or other flat areas, which have been previously disturbed. These common practices would minimize the long-term effects of these impacts.

# Antelope Complex Gather Capture Plan and EA

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With excess wild horses in the Spruce Allotment, soil loss from wind and water erosion, and invasion of undesired plant species would continue to occur as a result of over-utilization of vegetation, loss of perennial native grasses and continued and increased heavy trailing. This loss would be most notable in the vicinity of small spring meadows and other water sources with high levels of wild horse use.

## **No Action (Alternative E)**

No direct impacts are expected under this alternative. In the absence of a wild horse gather, however, soil loss from wind and water erosion, and invasion of undesired plant species would occur and expand as a result of over-utilization of vegetation, loss of perennial native grasses and continued and increased heavy trailing. This loss would be most notable in the vicinity of small spring meadows and other water sources with high levels of wild horse use.

### **3.1.4 Wetlands and Riparian Zones**

#### **Affected Environment**

The Antelope Complex has scattered riparian areas which are associated with springs/seeps (springs) and associated springs. These small springs provide water, forage and habitat diversity for native wildlife, livestock and wild horses. These systems occupy less than 0.1% of the landscape but are disproportionately important for biodiversity and users of the landscape including humans.

Riparian condition assessments were conducted between 2004 and 2009 to evaluate the condition of selected riparian areas. Riparian condition assessments are qualitative assessment of riparian areas based on quantitative science. The methodology evaluates the functionality of riparian areas based on hydrological, vegetation, and soils/erosional factors, within the context of the geologic setting and the potential of the area. Prichard et al. (1999) suggests the following definitions for spring and lentic areas:

“Lentic riparian-wetland areas are functioning properly when adequate vegetation, landform, or debris is present to:

- 1) dissipate energies associated with wind action, wave action, and overland flow from adjacent sites, thereby reducing erosion and improving water quality;
- 2) filter sediment and aid floodplain development;
- 3) improve flood-water retention and ground-water recharge;
- 4) develop root masses that stabilize islands and shoreline features against cutting action;
- 5) restrict water percolation;
- 6) develop diverse ponding characteristics to provide the habitat and water depth, duration, and temperature necessary for fish production, water bird breeding, and other uses;
- 7) and support greater biodiversity.”

## Antelope Complex Gather Capture Plan and EA

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Riparian condition assessments conducted at 31 riparian areas throughout the Antelope Complex resulted in ratings that span the full range of riparian functionality. It was determined that there were five (16%) riparian areas at proper functioning condition, four (13%) riparian areas functioning at risk with no apparent trend, nine (29%) springs functioning at risk with downward trend, and 13 (42%) non-functioning riparian areas. A list of riparian condition assessment ratings is presented in Appendix I.

Data recorded at spring sites indicated that poor riparian condition in the Antelope Complex is caused by impacts related to wild horse use and water diversion. The cause of disturbance (e.g. livestock vs. wild horse) was determined when clear evidence to distinguish the use was observed (e.g. hoof prints, viewing animals, or droppings). When clear evidence was not available to distinguish between livestock or wild horses, no assignment of disturbance could be made. Water diversion was determined to be a causal factor where riparian areas were small or lacking key components yet water was available or abundant in the diversion. A list of these determinations is presented in Appendix I.

Riparian condition assessments and other observations indicate that presence of wild horses is negatively impacting riparian resources within the Antelope Complex. In general, wild horses impact riparian areas by compacting and disturbing riparian soil making them less productive and less stable. Subsequent erosion of riparian soils results in shrinkage of the riparian area and decreased riparian value. These impacts increase when more wild horses are present. During summer months wild horses compete for scarce water resources and spend a lot of time near water resources and associated riparian zones. Additional impacts occur when wild horses dig at spring sources with their hooves to try to obtain more water. This results in a depression of the water table at spring sources and further reduction of the riparian area. Photos MD3 – MD7 and other photos below are typical of riparian areas in the Antelope Complex that have been negatively impacted by wild horse use.



## Antelope Complex Gather Capture Plan and EA

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Photo MD3. Sidehill Spring, Goshute Mountains (2007). Wild horse use has denuded spring head vegetation resulting in lowered water table, absence of riparian vegetation, and absence of hydric soil. Mark Dean, Wells Field Office Hydrologist is pictured at the spring. When authorized the livestock season of use is 11/1-12/1 and from 4/1-4/30; however, livestock grazing use is not authorized for the 2010 grazing schedule.



Sidehill Spring, Goshute Mountains showing continued impacts by wild horses and reduced flow (August 2010). When authorized the livestock season of use is 11/11-12/1 and 4/1-4/30. Livestock grazing use is not authorized for the 2010 grazing season.



## Antelope Complex Gather Capture Plan and EA

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Photo MD4. Rock Spring, Goshute Mountains. Wild horse use has denuded spring head vegetation resulting in lowered water table, absence of riparian vegetation, and absence of hydric soil (2007). When authorized the livestock season of use is 11/1-12/1.



Photo MD5. F. B. Springs, Spruce Mountain (2009). Wild horse and cattle use has decreased spring head vegetation resulting in lowered water table. Continued use at this level could lead to conditions similar to those shown in MD4 above. Livestock season of use is 7/1-9/30.



## Antelope Complex Gather Capture Plan and EA

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Photo MD6 – unnamed spring, Dolly Varden Mountains (2008). Wild horse use has denuded spring head vegetation resulting in lowered water table, absence of riparian vegetation, and absence of hydric soil. This is part of unit F-1 (not part of the livestock grazing permit) in the Valley Mountain Allotment. No livestock AUMs are authorized in this portion of Dolly Varden Range.



Same unnamed spring as shown above, looking towards the spring source, Dolly Varden Mountains (September 2010). Continued excessive wild horse use has denuded spring head vegetation resulting in lowered water table, absence of riparian vegetation, and absence of hydric soil. This is part of unit F-1 (not part of the livestock grazing permit) in the Valley Mountain Allotment. No livestock AUMs are authorized in this portion of Dolly Varden Range.



## Antelope Complex Gather Capture Plan and EA

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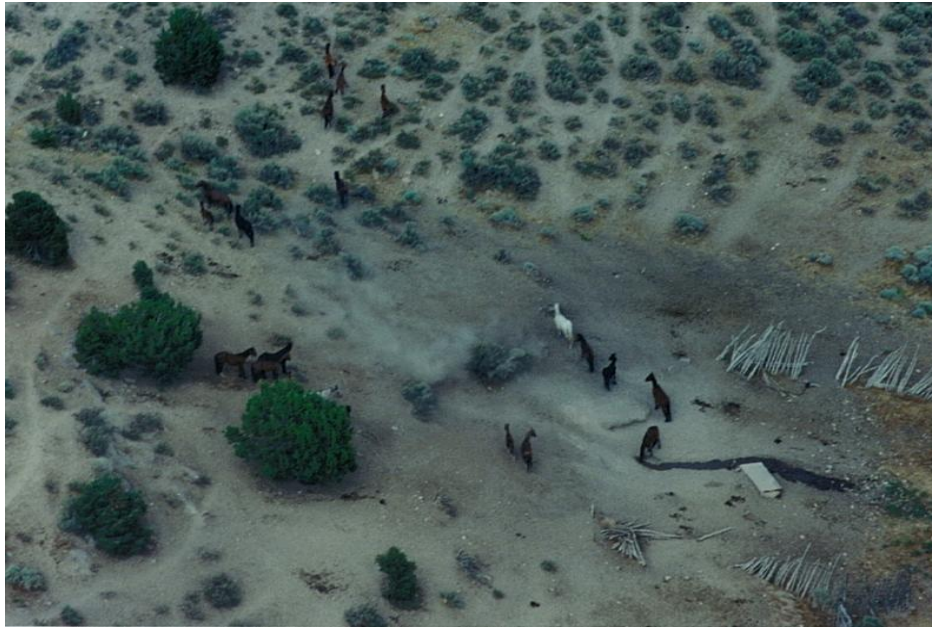


Photo MD7. Erickson Spring, Goshute Mountains, (2010). Long term wild horse use has drained former spring area indicated by darker soils. When authorized the livestock season of use is 11/1-12/1 and 4/1-4/30; however, livestock grazing is not authorized for the 2010 grazing season.



Erickson Spring, Showing continued impacts by wild horses to soils around spring (August, 2010). Spring is rated as non-functional. When authorized the livestock season of use is 11/1-12/1 and 4/1-4/30; however, livestock grazing is not authorized for the 2010 grazing season.



## Antelope Complex Gather Capture Plan and EA

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Impacts by wild horses at Dolly Varden Spring (on private land) June 2010.



Victoria Springs in the Dolly Varden Range with very limited flow showing excessive use by wild horses (August 2010). This is part of unit F-2 (not part of the livestock grazing permit) in the Spruce Mountain Allotment. No livestock AUMs are authorized in this portion of Dolly Varden Range.



## Antelope Complex Gather Capture Plan and EA

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Wild horses at Victoria Springs (October 2010). This is part of unit F-1 (not part of the livestock grazing permit) in the Valley Mountain Allotment. No livestock AUMs are authorized in this portion of Dolly Varden Range.



Unnamed spring in the Dolly Varden Range with very limited flow and showing excessive use by wild horses (September 2010). This is part of unit F-2 (not part of the livestock grazing permit) in the Valley Mountain Allotment. No livestock AUMs are authorized in this portion of Dolly Varden Range.

### **Direct and Indirect Effects of the Alternatives**

#### **Proposed Action and Alternatives B and C**



## Antelope Complex Gather Capture Plan and EA

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Removal of wild horses under the Proposed Action and Alternative B would reduce negative impacts to riparian areas and may result in some improvement of areas that are still functioning. Wild horse impacts would decrease but there would continue to be heavy pressure on existing riparian areas because of the limited number of water sources. Decreased utilization of riparian resources over the long term could result in improvement of riparian areas that are still functioning. Non-functional areas could experience some recovery but would not likely reach a functioning state without some additional management. The gather activities would not result in any substantive direct impacts to riparian resources.

Under Alternative C, decreased impacts would only affect riparian areas in the short term since increases in wild horse population over the next several years would result in the same level of impacts that has resulted in the current poor condition if excess wild horses were not promptly removed. The gather would not result in any substantive direct impacts to riparian resources.

### **Alternative D**

Outside of the Spruce Allotment, removal of wild horses would reduce negative impacts to riparian areas and may result in some improvement of areas that are still functioning. Wild horse impacts would decrease but there would continue to be heavy pressure on existing riparian areas because the wild horse population would remain in excess of AML. Decreased utilization of riparian resources over the long term could result in improvement of riparian areas that are still functioning. Non-functional areas could experience some recovery but would not likely reach a functioning state without some additional management. However, within the Spruce Allotment, excess wild horses would result in continued and intensified impacts to limited riparian areas. These excess wild horses would continue to impact riparian areas in adjacent allotments which might negate the limited improvement that would otherwise be expected from the decrease in numbers to the low end of AML. Functionality of riparian areas would decrease as more wild horses compete for scarce water resources.

The gather would not result in any substantive direct impacts to riparian resources.

### **No Action (Alternative E)**

Deferring a wild horse gather in the Antelope complex and allowing populations to increase would result in continued and intensified impacts to riparian areas. Functionality of riparian areas would decrease as more wild horses compete for scarce water resources.

### **3.1.5 Vegetation**

#### **Affected Environment**

# Antelope Complex Gather Capture Plan and EA

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In general, the vegetation communities consist of big sagebrush-grass, low sagebrush-grass, montane shrub, salt desert shrub, black sagebrush, pinyon-juniper, and montane riparian.

The foothill and mountain regions are dominated by big sagebrush-grass and low sagebrush-grass communities but also have areas of pinyon-juniper community. The shrub species typically found in the big sagebrush-grass and low sagebrush-grass communities are big sagebrush, low sagebrush and rabbitbrush. Typical grass species include bluebunch wheatgrass, Indian ricegrass, Sandberg's bluegrass, needlegrass and bottlebrush squirreltail. Forbs include milkvetch, arrowleaf balsamroot, lupine, phlox, and aster.

The pinyon-juniper community is primarily composed of Utah juniper, Rocky Mountain juniper and singleleaf pinyon. The understory in pinyon-juniper communities can range from no vegetation to the same species found in big sagebrush-grass and low sagebrush-grass communities.

The higher mountainous areas support mountain browse species including serviceberry, snowberry, and antelope bitterbrush as well as tree species such as limber pine, white fir, and bristlecone pine. Riparian areas at high elevations may support cottonwood and wild rose.

The valley regions are dominated by salt desert and black sagebrush communities. The shrub species typically found in these communities are winterfat, shadscale, bud sagebrush, greasewood, black sagebrush, and rabbitbrush. Typical grass species in the valleys include Indian ricegrass, Sandberg's bluegrass, needlegrass, and bottlebrush squirreltail. Forbs include milkvetch, lupine, phlox, and aster.

## **Direct and Indirect Effects of the Alternatives**

### **Proposed Action and Alternatives B and C**

Direct impacts associated with the Proposed Action and Alternatives B and C would consist of disturbance to vegetation immediately in and around the temporary gather site(s) and holding facilities. Impacts would be created by vehicle traffic and hoof action as a result of concentrating wild horses and could be locally high in the immediate vicinity of the gather site(s) and holding facilities. Generally, these sites would be small (less than one half acre) in size. Any impacts would remain site-specific and isolated in nature. These impacts would include trampling of vegetation. Impacts would be minimal in scope and would have a short-term duration.

In addition, most gather sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, gather sites are located near or on roads, pullouts, water hauling sites or other flat areas, which

## Antelope Complex Gather Capture Plan and EA

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have been previously disturbed. These common practices would minimize the long-term effects of these impacts.

Implementation of the Proposed Action and Alternatives B or C would reduce the current wild horse population to the established AML and provide the opportunity for the vegetative communities to progress toward achieving a thriving natural ecological balance. At the established AMLs, utilization by wild horses would be reduced, which would result in improved forage availability, improved vegetation density, increased vegetation cover, increased plant vigor, and improved seed production, seedling establishment, and forage production over current conditions. Higher quality forage species (grasses for wild horses and cattle) would be available. Competition for forage among wild horses, wildlife, and livestock would be reduced as utilization levels by wild horses decrease and rangeland health improves, thereby promoting healthier habitat and healthier animals. Allotment specific utilization objectives would not be exceeded. Reduced concentrations of wild horses would contribute to the recovery of the vegetative resource. Physical damage to shrubs and herbaceous vegetation associated with the physical passage of wild horses would be decreased. However, herd growth would occur faster under Alternative C leading to increased impacts as compared to the Proposed Action or Alternative B.

### **Alternative D**

Direct impacts associated Alternative D would consist of disturbance to vegetation immediately in and around the temporary gather site(s) and holding facilities. Impacts would be created by vehicle traffic and hoof action as a result of concentrating wild horses and could be locally high in the immediate vicinity of the gather site(s) and holding facilities. Generally, these sites would be small (less than one half acre) in size. Any impacts would remain site-specific and isolated in nature. These impacts would include trampling of vegetation. Impacts would be minimal in scope and would have a short-term duration.

In addition, most gather sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, gather sites are located near or on roads, pullouts, water hauling sites or other flat areas, which have been previously disturbed. These common practices would minimize the long-term effects of these impacts.

Within the Spruce Allotment impacts to vegetation would be expected from implementation of Alternative D. As a result of the excessive wild horse populations within the Spruce Allotment boundary, wild horses would continue to trail farther out from limited waters to foraging areas. Indirect impacts include increased competition for forage among multiple-users as wild horse populations continue to increase. Forage utilization would likely exceed the capacity of the range resulting in a loss of desired forage species from plant communities as plant health and watershed conditions deteriorate. Abundance and long-term production potential of desired plant communities

## Antelope Complex Gather Capture Plan and EA

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may be compromised, potentially precluding the return of these vegetation communities to their full potential.

Winterfat is excellent forage and has excellent tolerance to browsing in the winter. However, with the excessive wild horse numbers in the Spruce Allotment under Alternative D, over-browsing of winterfat would continue to occur. The United States Department of Agriculture Natural Resources Conservation Service (NRCS) recommends that no more than 25 percent of the annual season's growth should be removed during the active growing season (less during active spring growth period) and no more than 50 percent of the annual season's growth during dormant periods (fall-winter). As noted, utilization levels documented from 2001-2006 have ranged from 21-78%. With Alternative D these levels would be expected to increase. Under this type of utilization, loss of winterfat communities would be expected to occur in the Spruce Allotment.

Outside of the Spruce Allotment, implementation of Alternative D would reduce the current wild horse population to the established AML and provide the opportunity for the vegetative communities to progress toward achieving a thriving natural ecological balance. At the established AMLs, utilization by wild horses would be reduced, which would result in improved forage availability, improved vegetation density, increased vegetation cover, increased plant vigor, and improved seed production, seedling establishment, and forage production over current conditions. Higher quality forage species (grasses for wild horses and cattle) would be available. Competition for forage among wild horses, wildlife, and livestock would be reduced as utilization levels by wild horses decrease and rangeland health improves, thereby promoting healthier habitat and healthier animals. Allotment specific utilization objectives would not be exceeded. Reduced concentrations of wild horses would contribute to the recovery of the vegetative resource. Physical damage to shrubs and herbaceous vegetation associated with the physical passage of wild horses would be decreased.

### **No Action (Alternative E)**

There would be no direct impacts expected under this alternative. However, as a result of the excessive wild horse populations within the Antelope Complex, wild horses would continue to trail farther out from limited waters to foraging areas, within and outside of the HMA boundaries. Indirect impacts include increased competition for forage among multiple-users as wild horse populations continue to increase. Forage utilization would likely exceed the capacity of the range resulting in a loss of desired forage species from plant communities as plant health and watershed conditions deteriorate. Abundance and long-term production potential of desired plant communities may be compromised, potentially precluding the return of these vegetation communities to their full potential.

Winterfat is excellent forage and has excellent tolerance to browsing in the winter. However, with the No Action Alternative over-browsing of winterfat would continue to occur. The NRCS recommends that no more than 25 percent of the annual season's growth should be removed during the active growing season (less during active spring growth period) and no more than 50 percent of the annual season's growth during



## Antelope Complex Gather Capture Plan and EA

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dormant periods (fall-winter). As noted, utilization levels documented from 2001-2006 have ranged from 21-78%. With the No Action Alternative these levels would be expected to increase and the loss of winterfat communities would be expected to occur.

### **3.1.6 Wildlife, Special Status Species, and Migratory Birds and Their Habitat**

#### **Affected Environment**

There are over 400 species of vertebrate wildlife that potentially occur in northeast Nevada including elk, mule deer, and pronghorn. The Antelope, Antelope Valley, Goshute, and Spruce-Pequop HMAs provide habitat for many of these species on a seasonal or yearlong basis. Based upon a digital landcover GIS dataset classified by Utah State University using Landsat ETM+ satellite imagery obtained between 1999 and 2001, the HMAs are comprised of predominantly three upland key habitats described in the Nevada Wildlife Action Plan. These three habitats, encompassing around 99% of the HMAs, are Sagebrush, Lower Montane Woodlands (mostly pinyon-juniper but also mountain mahogany), and Intermountain (cold desert) Scrub (primarily salt desert scrub and greasewood flats).

Although riparian areas comprise a relatively small portion of the available habitat, they are of disproportionately high importance in this area. Many wildlife species associated with the predominant upland habitat types require riparian habitat to satisfy certain life cycle requirements. Other wildlife species derive all of their habitat requirements from these small patches of riparian habitat.

In addition to the predominant upland habitat types within the HMAs, small areas of Intermountain Conifer Forests and Woodlands (mostly mixed conifer and limber pine-bristlecone pine types), Cliffs and Canyon, Grasslands and Meadows, and Aspen Woodland are present and important on a local scale. These habitat types provide quality habitat for many species that are typically found at higher elevations.

#### **Big Game**

Pronghorn use areas are shown in Map 11. In general, pronghorn are found in the valleys between mountain ranges. Yearlong habitat is primarily found in areas dominated by salt desert scrub and greasewood flats. Additional habitat is provided by certain sagebrush communities. Low sagebrush on mountain ridges can be used as summer habitat.

Mule deer use areas are shown in Map 12. In general, mule deer are found along the mountain ranges within the HMAs. Lower slopes are used during the winter while upper elevations are used during summer. Salt desert scrub and greasewood flats are generally avoided by mule deer except during migration. The highest elevation areas are only considered limited range, primarily due to lower amounts of cover associated with low sage.

## Antelope Complex Gather Capture Plan and EA

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Elk use areas are shown in Map 12. Elk use in the HMAs is primarily on the mountain tops and slopes. Elk are primarily associated with woodland and forest areas, but riparian habitat and sagebrush habitat are also important components of elk seasonal use areas.

### **Special Status Species**

Special status species include species that are listed or proposed for listing as threatened or endangered (T&E) under the Endangered Species Act (ESA), species that are candidates for listing under the ESA, species that are listed by the State of Nevada, and/or species that are on Nevada BLM's list of Sensitive Species as of July 29, 2003. No federally listed or proposed species are known to exist in the HMAs, and no critical habitat for any aquatic or terrestrial species has been designated or proposed for designation under the Endangered Species Act in the Antelope Complex. Two species that are candidates for listing under the ESA are present in the HMAs. These are the Columbian spotted frog and the greater sage-grouse. Special status species that have been documented within the HMAs are identified in the master list of species presented in Appendix J; Appendix K lists terrestrial vertebrate species with potential to occur within the HMAs based upon key habitats present. For this analysis, sensitive species were grouped based upon morphological similarities or similar habitat requirements in order to avoid unnecessary repetition.

*Eagles:* On July 9, 2007, the bald eagle was removed ("de-listed") from the list of threatened and endangered species. BLM is coordinating with the Nevada Department of Wildlife (NDOW) to ensure compliance with state regulations regarding the bald eagle. As of August 30, 2007, BLM policy is to consider the bald eagle as a BLM Sensitive Species. After de-listing, bald eagles will continue to be protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act. Both of these laws prohibit killing, selling or otherwise harming eagles, their nests, or their eggs. In May 2007, the U.S. Fish and Wildlife Service (Service) clarified its regulations implementing the BGEPA and published the National Bald Eagle Management Guidelines. The Service has established a permit program under the BGEPA that would authorize limited take of bald and golden eagles consistent with the purpose and goal of the BGEPA. The Service has also prepared a draft post-delisting bald eagle monitoring plan. These documents and more information about bald and golden eagle are available on the Service's website at <http://www.fws.gov/migratorybirds/baldeagle.htm>. Golden eagles have been documented as year-round residents of the HMAs. Bald eagles have been documented and are likely winter foragers within the HMAs.

*Other Raptors:* Northern goshawks, ferruginous hawks, Swainson's hawks, prairie falcons, and peregrine falcons are sensitive raptors that have been documented within the HMAs. Small mammals and jackrabbits are abundant in these habitats and provide adequate prey for raptors. These raptors utilize key habitats from the low-elevation Intermountain (cold desert) Scrub through the high-elevation Intermountain Conifer Forests and Woodlands.

## Antelope Complex Gather Capture Plan and EA

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Owls: Long-eared owls, flammulated owls, and burrowing owls are sensitive owls that have been documented within the HMAs. Long-eared owls and flammulated owls are associated with woodlands and riparian areas. Abandoned mammal burrows, such as those created by badgers, help to provide nesting habitat for burrowing owls. Burrowing owls tend to use disturbed or open sites with minimal vegetation for nesting and loafing, such as recent burned areas or areas near troughs, corrals, or livestock mineral licks where open terrain exists. This may be due to the lack of vegetation at these sites that allows increased visibility from the burrow entrance. Short-eared owls may utilize potential habitat within the HMAs including pinyon-juniper stands and riparian habitats. They, however, have not been documented within the HMAs.

Gallinaceous Birds: On March 5, 2010, the U.S. Fish and Wildlife Service announced Proposed Rules in the Federal Register for the notice of 12-month findings for petitions to list the greater sage grouse as a threatened or endangered species. The Fact Sheet for this finding iterated the following, *“After thoroughly analyzing the best scientific and commercial information available, the Fish and Wildlife Service has concluded that the greater sage-grouse warrants protection under the Endangered Species Act. However, the Service has determined that proposing the species for protection is precluded by the need to take action on other species facing more immediate and severe extinction threats. As a result, the sage-grouse will be added to the list of species that are candidates for Endangered Species Act protection. The Service will review the status of the sage-grouse annually, as we do all candidate species, to determine whether it warrants more immediate attention.”* Greater sage-grouse have been documented within the HMAs. Most habitat occurs at low to mid-elevations on the west and south portions of the HMAs. The Goshute HMA does not provide known habitat for greater sage-grouse. Greater sage-grouse winter habitat occurs in sagebrush-dominated sites where sagebrush protrudes above the snow. Nesting and early summer habitat is tied to sagebrush sites with diverse, well-vegetated understories. These habitats, along with wet meadows and other riparian sites, provide good habitat for brood rearing as well. Thirteen active leks are known to exist within the HMAs. Mountain quail and Columbian sharp-tailed grouse are additional sensitive gallinaceous birds that could potentially utilize the habitats present within the HMAs; however neither has been documented within the HMAs.

Shorebirds and Other Riparian Associates: Sandhill cranes have been documented within the HMAs. Habitat is probably restricted to riparian areas. Least bitterns, snowy plovers, long-billed curlews, black terns, and yellow-billed cuckoos are other sensitive riparian bird species that may exist on riparian habitats within the HMAs; however none have been documented.

Woodpeckers: Lewis’s woodpeckers and red-naped sapsuckers are associated with woodlands and riparian areas and, thus, have the potential to utilize habitat within the HMAs. Neither has been documented within the HMA’s.

Songbirds: No sensitive songbird species have been documented within the HMAs; however potential habitat exists within the HMAs for several species. Potential breeding and nesting habitat for loggerhead shrikes is provided by the sagebrush, pinyon juniper,

## Antelope Complex Gather Capture Plan and EA

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and salt desert scrub habitats. Pinyon jays and juniper titmice are potential year-round residents of pinyon-juniper stands while gray vireos may incidentally breed in these stands. Sagebrush and pinyon-juniper habitats also provide summer habitat for vesper sparrows and winter habitat for black rosy-finches. Aspen stands and wooded riparian habitats can provide breeding habitat for yellow-breasted chats and bobolinks.

*Bats*: Bats utilize a variety of habitats within the HMAs. Of the 16 bats documented on the Elko District, ten have been documented within the HMAs. These include Townsend's big-eared bat, California Myotis, western small-footed Myotis, long-eared Myotis, little brown bat, long-legged Myotis, Yuma Myotis, Mexican free-tailed bat, Silver-haired bat, and pallid bat. The majority of these bats have been documented on Spruce Mountain, in the Pequop Mountains, or along the Goshute Range. It can be assumed that most of the mountain ranges in the HMAs provide roosting habitat for bats, particularly those with abandoned mine shafts. Foraging habitat can occur nearly anywhere in the HMAs but is probably concentrated in wooded areas and around riparian areas.

*Pygmy Rabbits*: Pygmy rabbits were petitioned for listing under the Endangered Species Act. On May 20, 2005, the U.S. Fish and Wildlife Service announced a 90-Day Finding in the Federal Register indicating that, "... the petition does not provide substantial information indicating that listing the pygmy rabbit may be warranted." The Finding does not downplay the need to conserve, enhance or protect pygmy rabbit habitat. Pygmy rabbits are found in a variety of vegetation types, including sagebrush, greasewood, and salt desert scrub habitats, provided that the soils are appropriate for creating their burrow system. No known formal surveys have been completed within the HMAs; however several incidental observations have been made.

*Other Mammals*: Preble's shrews and river otters prefer riparian habitats; however, neither has been documented within the HMAs.

*Frogs*: Both Columbian spotted frogs and northern leopard frogs have been documented within the HMAs. Both are restricted to riparian habitats. The only documented occurrence of either is on the southeast edge of the Goshute HMA.

*Reptiles*: No sensitive reptiles have been documented within the HMAs. Potential habitat for short-horned lizards and Sonoran mountain kingsnakes is provided by pinyon-juniper areas. Short horned lizards could also potentially use sagebrush and coniferous forest habitats.

### **Other Migratory Birds**

In addition to those protections offered to certain migratory birds that are considered Nevada BLM Sensitive Species, all migratory birds are offered certain protections under the Migratory Bird Treaty Act and Presidential Executive Order. On January 11, 2001, President Clinton signed the Migratory Bird Executive Order. This Executive Order outlines the responsibilities of Federal agencies to protect migratory birds and directs



## Antelope Complex Gather Capture Plan and EA

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executive departments and agencies to take certain actions to further implement the Migratory Bird Treaty Act. A list of the migratory birds affected by the President's executive order is contained in 50 CFR § 10.13.

Under the provisions of the Migratory Bird Treaty Act, the unauthorized take (death or injury) of migratory birds is a strict liability criminal offense that does not require knowledge or specific intent on the part of the offender. The U.S. Fish and Wildlife Service is responsible for issuing a permit to allow take of a migratory bird. Other migratory birds that have been documented within the HMAs are identified in the master list of species presented in Appendix J. Appendix K lists all vertebrate species with potential to occur within the HMAs based upon key habitats present including migratory birds.

### **Direct and Indirect Effects of Alternatives**

#### **Proposed Action and Alternatives B and C**

There would be no direct long-term negative impacts to big game species, sensitive species, or migratory birds. The gather would occur outside breeding and nesting season for birds. Important habitats such as known sage grouse leks, pygmy rabbit burrow colonies, etc. would be avoided and not used for gather sites in order to protect the integrity of these sites. Wildlife adjacent to gather sites may be temporarily displaced during capture operations by increased activity of gather setup, helicopters, and vehicle traffic; however, normal behaviors should resume once capture operations cease. Reduction of wild horse numbers would result in reduced competition between wild horses and wildlife as soon as the gather is completed. This would result in improved habitat conditions by increasing forage availability, herbaceous cover, and quality. In addition, the gather and reduction of wild horse numbers would reduce competition between wild horses and wildlife for available forage and water resources.

In addition to the removal of wild horses to reduce numbers to the low end of AML, mares released back into the HMAs under the Proposed Action would be treated with fertility control vaccines. This treatment would prolong the positive impacts to wildlife habitat resulting from reduction in wild horse numbers. It would also decrease the necessity of emergency gathers which would reduce the frequency of the short-term disturbances to wildlife species associated with gather operations. Under Alternative B, the altered sex ratio would have a similar positive effect as the fertility control vaccines in Alternative A, however probably shorter-lived.

Alternative C does not include the application of the fertility control vaccines as in the proposed action. As a result, the positive impacts to wildlife habitat resulting from reduction in wild horse numbers would be more short-term in nature and would disappear as wild horse numbers return to current levels. Likelihood of periodic emergency gathers would remain constant, resulting in more frequent (2 to 3 year intervals) short-term disturbances to wildlife species associated with gather operations.

# Antelope Complex Gather Capture Plan and EA

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## **Alternative D**

There would be no direct long-term negative impacts to big game species, sensitive species, or migratory birds. The gather would occur outside breeding and nesting season for birds. Important habitats such as known sage grouse leks, pygmy rabbit burrow colonies, etc. would be avoided and not used for gather sites in order to protect the integrity of these sites. Wildlife adjacent to gather sites may be temporarily displaced during capture operations by increased activity of gather setup, helicopters, and vehicle traffic; however, normal behaviors should resume once capture operations cease. Reduction of wild horse numbers would result in reduced competition between wild horses and wildlife as soon as the gather is completed. This would result in improved habitat conditions by increasing forage availability, herbaceous cover, and quality. In addition, the gather and reduction of wild horse numbers would reduce competition between wild horses and wildlife for available forage and water resources.

Within the Spruce Allotment boundary, implementation of Alternative D would leave an excess number of wild horses above AML. With this excess population there would be continued competition with wild horses for water and forage resources over the short and long-term. Wild horses are aggressive around water sources, and some wildlife species may not be able to compete. The competition for resources may lead to increased stress or dislocation of native wildlife species, or possible death of individual animals. Improvement in habitat condition for wildlife would not occur, and habitat conditions would deteriorate further as wild horse numbers increase annually.

Outside of the Spruce Allotment boundary, implementation of Alternative D would reduce wild horse numbers to the low end of AML. In addition to the removal of wild horses to reduce numbers to the low end of AML, mares released back into the HMAs under Alternative D would be treated with fertility control vaccine and the sex ratio of the population would be adjusted to 60:40 males to females. This treatment and sex ratio adjustment would prolong the positive impacts to wildlife habitat resulting from reduction in wild horse numbers. The fertility treatment and sex ratio adjustment would also decrease the necessity of emergency gathers or need for more frequent gathers which would reduce the frequency of the short-term disturbances to wildlife species associated with gather operations.

## **No Action (Alternative E)**

Wildlife would not be temporarily displaced or disturbed by gather operations under the no action alternative. However, there would be continued competition with wild horses for water and forage resources over the short and long-term. Wild horses are aggressive around water sources, and some wildlife species may not be able to compete. The competition for resources may lead to increased stress or dislocation of native wildlife species, or possible death of individual animals. Improvement in habitat condition for wildlife would not occur, and habitat conditions would deteriorate further as wild horse numbers increase annually.

# Antelope Complex Gather Capture Plan and EA

## 3.1.7 Livestock

### Affected Environment

The Antelope Complex encompasses portions of several livestock grazing allotments: Antelope Valley, Badlands, Becky Creek, Becky Springs, Boone Springs, Chase Springs, Cherry Creek, Chin Creek, Currie, Deep Creek, East Big Springs, Ferber Flat, Goshute Mountain, Lead Hills, Leppy Hills, Lovell Peak, McDermid Creek, North Steptoe, North Steptoe Trail, Sampson Creek, Schellbourne, Spruce, Sugarloaf, Tippet, Tippet Pass, Utah/Nevada North, Utah/Nevada South, Valley Mountain, West Big Springs, White Horse, and West White Horse. See Appendix F for a summary of allotment and related decisions for the Antelope Complex.

The following table identifies the total allotment acreage, land status of the allotments by acres, and what percentage of each allotment can be found in an HMA.

**Table 5. Land Status**

Allotment	Public Land- BLM Acres	Private Land Acres	Total Acres	% of Allotment in an HMA
Antelope Valley	45,949	160	46,109	100%
Badlands	17,664	0	17,664	100%
Becky Creek	13,884	202	14,086	99%
Becky Springs	46,333	0	46,333	100%
Boone Springs	77,882	567	78,449	100%
Chase Springs	45,711	1,715	47,426	31%
Cherry Creek	160,085	6,134	166,219	5%
Chin Creek	147,615	1,052	148,667	99%
Currie	154,457	2,703	157,160	91%
Deep Creek	23,334	487	23,821	98%
East Big Springs	252,584	53,156	305,740	20%
Ferber Flat	21,705	0	21,705	100%
Goshute Mountain	5,771	0	5,771	100%
Lead Hills	80,164	0	80,164	51%
Leppy Hills	49,971	6,597	56,568	53%
Lovell Peak	2,413	5	2,418	94%
McDermid Creek	6,623	133	6,756	100%
North Steptoe	15,442	163	15,605	75%
North Steptoe Trail	37,051	971	38,022	74%
Sampson Creek	13,487	158	13,645	99%
Schellbourne	17,986	752	17,985	16%
Spruce	529,148	17,810	546,958	67%
Sugarloaf	23,864	0	23,864	97%
Tippet	192,374	8,298	200,672	27%
Tippet Pass	80,073	1,227	81,300	14%
UT/NV North	67,524	3,004	70,533	65%
UT/NV South	37,039	627	37,665	100%
Valley Mountain	267,024	1,043	268,067	57%

## Antelope Complex Gather Capture Plan and EA

Allotment	Public Land- BLM Acres	Private Land Acres	Total Acres	% of Allotment in an HMA
West Big Springs	107,947	67,875	175,821	<1%
West White Horse	6,557	0	6,557	100%
White Horse	61,336	0	61,336	53%

There are currently a total of 38 permits for grazing in these 31 allotments (which together include 2,608,997 acres of public lands). The permittees can use a combined total of 93,982 active use Animal Unit Months (AUMs) annually. An AUM is the amount of forage needed to sustain one cow, one domestic horse, five sheep or five goats for a month. As long as grazing use occurs during the permitted season of use and does not exceed the number of permitted AUMs, the number of livestock grazed can vary from year to year. The following table summarizes permitted livestock use for the allotments in the Antelope Complex.

**Table 6. Permitted Livestock Use Summary for Antelope Complex Allotments**

Allotment	Season of Use	Type of Livestock	Active Use (AUMs)	Suspended Use <sup>1</sup> (AUMs)	Total Permitted Use (AUMs)
Antelope Valley	11/1-5/31	Cattle	2,691	2,685	5,376
Badlands	11/1-3/31	Sheep	1,018	none	1,018
Becky Creek	11/1-3/15	Goats	335	none	671
	11/1-3/15	Sheep	336		
Becky Springs	11/01-4/30	Sheep	2,912	none	3,842
	11/15-2/28	Cattle	930		
Boone Springs	11/1-3/31	Sheep	2,002	945	2,947
Chase Springs	4/1-11/30	Cattle	2,586	none	2,586
Cherry Creek	3/1-2/28	Cattle	6,197	2,892	9,089
Chin Creek	11/1-	Cattle	3,564	2,206	13,245
	5/313/1- 2/28	Sheep	3,619	3,856	
Currie	3/1-2/28	Cattle	5,366	none	5,504
	3/1-2/28	Horses <sup>2</sup>	138		
Deep Creek	11/1-5/15	Cattle	2,934	none	2,934
East Big Springs	3/1-2/28	Cattle	10,150	6,448	16,598
Ferber Flat	11/1-4/20	Sheep	1,498	1,239	2,737
Goshute Mountain		Sheep	465	none	465
Lead Hills	11/1-4/15	Sheep	3,314	3,933	7,247
Leppy Hills	11/1-4/30	Sheep	2,257	1,234	3,491
Lovell Peak	7/1-9/30	Goats	52	57	162
	7/1-9/30	Sheep	53		
McDermid Creek <sup>3</sup>	5/1-7/15	Cattle	--	--	--
North Steptoe	10/1-3/15	Sheep	700	589	1,289
North Steptoe Trail	9/15-10/15 3/1-3/30	Sheep	253	none	253
Sampson Creek	5/1-9/30	Sheep	1,327	265	1,592
Schellbourne	10/15-5/15	Cattle	685	767	1,452452
Spruce	3/1-2/28	Cattle	10,965	2,458	13,423
Sugarloaf	11/1-4/20	Sheep	1,979	22	2,001
Tippett	3/1-2/28	Cattle	4,068	815	13,615



## Antelope Complex Gather Capture Plan and EA

Allotment	Season of Use	Type of Livestock	Active Use (AUMs)	Suspended Use <sup>1</sup> (AUMs)	Total Permitted Use (AUMs)
	4/16-12/15	Sheep	4,492	4,240	
Tippett Pass	11/1-5/15	Cattle	2,646	3,217	8,177
	10/1-6/15	Sheep	1,268	1,046	
Utah/Nevada North	11/1-4/30	Sheep	2,115	1,589	3,704
Utah/Nevada South	11/1-4/30	Sheep	1,690	956	2,646
Valley Mountain	11/1-5/15	Cattle	4,532	1,040	5,572
West Big Springs	3/1-2/28	Cattle	3,651	1,734	5,385
West White Horse	12/1-2/28	Sheep	465	none	465
White Horse	11/1-4/15	Sheep	2,154	2,070	4,224

<sup>1</sup>Suspended use includes historical, conservation nonuse, voluntary nonuse, and suspensions due to drought and/or until objectives are met.

<sup>2</sup> Horse use is by domestic horses in the Currie Allotment and is limited to a fenced pasture outside of an HMA.

<sup>3</sup> McDermid Creek is managed and permitted as part of the Currie Allotment. McDermid Creek permitted AUMs are included under the Currie Allotment's AUMs summarized above.

The grazing year is from 3/1 to 2/28 of the following calendar year. The permitted season of use for an allotment may span a portion of two grazing years. Actual use for the allotments in the Antelope Complex from the 2002 grazing year through the 2009 grazing year is summarized below.

**Table 7. Grazing Use in Antelope Complex Allotments in AUMs by Grazing Year (3/1 to 2/28)**

Allotment	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Antelope Valley	1834	nonuse	1170	716 <sup>2</sup>	8 <sup>2</sup>	854	858	nonuse
Badlands	1239 <sup>2</sup>	979	551	1078	1203	nonuse	1066	1048
Becky Creek	304	569	378	374	nonuse	nonuse	nonuse	nonuse
Becky Springs	455	915	717	746	290	nonuse	755	556
Boone Springs	nonuse	205	781	182	928	847	1052	1239
Chase Springs	939 <sup>2</sup>	455	634	1068 <sup>2</sup>	893 <sup>2</sup>	1634 <sup>2</sup>	1155	147 <sup>1</sup>
Cherry Creek	3972	3749	2751	3865	3197	4152	3955	3173
Chin Creek	2169	2806	1224	2414	2774	618	1010	1613
Currie	3257	3448	3167	4025	3389	4338	3815	4587
Deep Creek	1771	1921	1839	1597	1977	1513	509	990
East Big Springs <sup>3</sup>	4211	1480	1866	2708	1695	nonuse	2694	266
Ferber Flat	1668	689	nonuse	nonuse	670	1191	390	948
Goshute Mountain <sup>4</sup>	--	--	--	--	--	--	--	--
Lead Hills	4463	870	nonuse	25	961	2459	2008	1329
Leppy Hills	703	1339	937	nonuse	1360 <sup>2</sup>	1844	1681	1832
Lovell Peak	nonuse	32	53	73	nonuse	nonuse	nonuse	nonuse
McDermid Creek <sup>5</sup>	--	--	--	--	--	--	--	--
North Steptoe	223	448	425	350	nonuse	341	638	664
North Steptoe	--	--	--	--	--	--	130	122

## Antelope Complex Gather Capture Plan and EA

Allotment	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Trail <sup>6</sup>								
Sampson Creek	307	117	196	444	507	nonuse	1027	209
Schellbourne	175	128	244	99	95	319	222	206
Spruce	8900	9073	5319	9933	8965	10656	9366	4634
Sugarloaf	1634	1419	nonuse	nonuse	1269	938	882	691
Tippett	5054	4343	2720	3782	4104	2753	2985	3125
Tippett Pass	1217	2236	1937	2684	1535	582	745	1093
UT/NV North	nonuse	1236	1548	1731	1678	1606	1504	1179
UT/NV South	1817	221	645	1133	696	603	940	736
Valley Mountain	4396	4216	1834	3619	3846	3228	3053	3167
West Big Springs	nonuse	3256	3691	1173	2663 <sup>2</sup>	2423 <sup>2</sup>	769	758
West White Horse	313	67 <sup>2</sup>	312 <sup>2</sup>	319 <sup>2</sup>	215	277	281	461
White Horse	2288	2338	1459	501	1791 <sup>2</sup>	1218	2688	1891

<sup>1</sup> Not all actual use has been submitted for the 2009-2010 grazing season to date.

<sup>2</sup> Numbers are from billed use, since actual use data were unavailable.

<sup>3</sup> Actual use shown is for the Shafter Pasture only. The Shafter Pasture is the only pasture of the East Big Springs Allotment within an HMA.

<sup>4</sup> Goshute Mountain is managed and grazed in conjunction with the Badlands Allotment. Goshute Mountain actual use AUMs are combined with the actual use AUMs of the Badlands Allotment summarized above.

<sup>5</sup> McDermid Creek is managed and permitted as part of the Currie Allotment. McDermid Creek actual use AUMs are reported as part of the Currie Allotment actual use AUMs summarized above.

<sup>6</sup> Actual use for the North Steptoe Trail in grazing years 2002 to 2007 was combined with the actual use for allotments for which the trail goes through and was not reported separately.

### Direct and Indirect Effects of Alternatives

#### Proposed Action and Alternatives B and C

Experience has shown that wild horse gather operations have few direct impacts to cattle and sheep grazing. Livestock located near gather activities could be temporarily disturbed or displaced by the helicopter and the increased vehicle traffic during the gather operations. Typically livestock would move back into the area once gather operations cease. Removal of excess wild horses would result in an increase in forage availability and quality, reducing competition between livestock and wild horses for available forage and water resources. Direct impacts of the gather activities itself would be minor and short-term.

Indirect impacts to livestock grazing from the Proposed Action and Alternatives B and C would be an increase in forage availability and quality, reduced competition for water and forage, and improved vegetative resources.

# Antelope Complex Gather Capture Plan and EA

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## **Alternative D**

Alternative D would have the same direct impacts to cattle and sheep grazing as the Proposed Action and Alternatives B and C. Livestock located near gather activities could be temporarily disturbed or displaced by the helicopter and the increased vehicle traffic during the gather operations. Typically livestock would move back into the area once gather operations cease. Direct impacts of the gather activities itself would be minor and short-term.

Indirect impacts to livestock grazing from Alternative D outside the Spruce Allotment would be similar to those of the Proposed Action and Alternatives B and C: an increase in the forage availability and quality, reduced competition for water and forage, and improved vegetative resources. Initially, Alternative D would result in a decrease in competition between livestock and wild horses for available forage and water at the same level as Alternatives A, B, and C because the same number of wild horses would be removed from the area outside of the Spruce Allotment. However, excess horses from the inside Spruce Allotment may potentially move into the areas outside of the Spruce Allotment seeking forage and water, making the positive impacts of Alternative D short-lived. In addition, with Alternative D, fertility control and adjustment of sex ratios would be implemented which would be expected to slow down the herd growth.

However, under Alternative D only a portion of the excess wild horses would be removed within the Spruce Allotment, so no improvement in vegetative resources is expected. Minimal increase in forage availability and quality would be expected. There would be a slight decrease in competition between livestock and wild horses for available forage and water resources but this decrease would be short-lived. This indirect impact would be only slightly less than if the No Action Alternative were implemented. The positive indirect impacts under Alternative D outside of the Spruce Allotment would likely be offset by the negative impacts within the allotment.

## **No Action (Alternative E)**

Livestock would not be displaced or disturbed due to gather operations under the No Action Alternative. However, there would be increased competition with wild horses for limited water and forage resources throughout the Antelope Complex Allotments as wild horses continue to increase above AML.

### **3.1.8 Wilderness Study Areas and Becky Peak Wilderness**

#### **Affected Environment**

The Antelope Complex contains the entire Becky Peak Wilderness Area and Bluebell, Goshute Peak, and South Pequop Wilderness Study Areas (WSA). Refer to Map 14 for WSA locations.

The Becky Peak Wilderness area lies at the northern end of the Schell Creek Range in eastern Nevada. Vegetation primarily includes desert brush and grass at the lower

## Antelope Complex Gather Capture Plan and EA

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elevations and a scattering of pinyon pine and juniper stands on the upland slopes of Becky Peak and surrounding hillsides. Atop Becky Peak itself (9,859 feet), you will encounter bristlecone and limber pine trees. Wildflowers can be abundant in the spring and include yarrow, prickly poppy, prickly pear cactus, larkspur, lupine, paintbrush, and Sego lilies. Pronghorn antelope are frequently seen through the sagebrush lowlands. Other animals that may be spotted on a visit to Becky Peak Wilderness area include mule deer, wild horses, lizards and a variety of birds.

The Nevada Wilderness Study Area Notebook (Elko District Office, October 2000), states that the Goshute Peak WSA consists of steep, mountainous topography with small stands of mixed conifers and many canyons radiating from the central ridgeline, providing outstanding naturalness. Man's imprints are absent from the higher elevations. In the lower elevations, man's imprint is present but not noticeable due to the dense pinyon-juniper woodlands. There is approximately one mile of cherry-stem road, 27 miles of vehicular ways, an old deer hunter's cabin, a deer hunting camp, a corral, one mile of barbed wire fence, and one developed spring. Most of these intrusions penetrate less than one mile into the WSA. Only the raptor research project, with its plywood blinds, tents and maintained access trail affects the higher elevations. Outstanding opportunities for solitude exist within the WSA due to topography and densely wooded areas. The WSA also has outstanding opportunities for primitive and unconfined recreation. Special features of the WSA include the raptor migration route and the presence of bristlecone pine trees at higher elevations.

The South Pequop WSA is predominately natural with densely-forested, highly dissected terrain essentially untouched by man. Vegetation ranges from sagebrush and grasses on the south-facing slopes to dense stands of white fir and limber pine on the northern exposures. Pinyon-juniper woodlands occupy much of the mountain range, while nearly impenetrable shrub thickets cover many slopes. The area's 11 miles of vehicle ways are generally unnoticeable and do not affect its naturalness. There are outstanding opportunities for solitude due to the steep canyons extending east and west from the knife-edged ridgeline and dense vegetation. Occasionally military aircraft disrupt the solitude. The WSA also contains outstanding opportunities for primitive and unconfined recreation. Bristlecone pine trees are present in higher elevations, and the area offers outstanding opportunities for fossil collecting.

Bluebell WSA consists of steep, mountainous terrain, with many canyons radiating from the central ridgeline of mountain peaks. The WSA is essentially free of man's imprints. Manmade features include approximately 20 miles of ways, eight miles of cherry stem roads, four corrals, one mile of barbed wire fence, two developed springs, and 10 small pit reservoirs. Outstanding opportunities for solitude exist within the WSA due to the topographic and vegetative screening. There are about 15 drainages and hundreds of small canyons with moderately dense stands of pinyon pine, limber pine, Utah juniper, white fir, and mountain mahogany. Military aircraft sometimes disrupt the solitude. Bristlecone pine trees also occur at higher elevations. The Bluebell WSA does have moderate to high potential for mineral resources, including gold. Because of this mineral



## Antelope Complex Gather Capture Plan and EA

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potential and the less than outstanding wilderness values in the northern part of the WSA, the entire area is recommended for non-wilderness by the BLM.

Wild horses are present in all three of the Wilderness Study Areas and Becky Peak Wilderness. The presence of wild horses in a WSA or Wilderness, in most cases, positively contributes to the visitor's experience. However, it is shown that when horse numbers exceed AML, impacts occur in the Wilderness and WSAs. Vegetation monitoring in relation to use by wild horses in the Antelope Complex has shown that current wild horse population levels are exceeding the capacity of the area to sustain wild horse use over the long-term. Monitoring at several springs within the three WSAs shows increased trampling and disturbance at those sites.



Bluebell WSA, Rock Spring Tank (2009) shows wild horse use that has denuded spring head vegetation resulting in lowered water table, absence of riparian vegetation, and absence of hydric soil. When authorized, the livestock season of use is 11/1-12/1.

## Antelope Complex Gather Capture Plan and EA

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Bluebell WSA, Rock Spring (2002) from the air showing wild horse use that has denuded spring head vegetation resulting in lowered water table, absence of riparian vegetation, and absence of hydric soil. When authorized, the livestock season of use is 11/1-12/1.



Bluebell WSA, Rock Spring with broken pipeline and trampling by wild horses (2009).  
When authorized, the livestock season of use is 11/1-12/1.



## Antelope Complex Gather Capture Plan and EA

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Bluebell WSA, Sidehill Spring showing very limited flow and impacts by wild horses (2010). When authorized the livestock season of use is 11/1-12/1 and from 4/1-4/30.



Bluebell WSA, Morgan Basin Spring, (2010) showing very limited flow and impacts by wild horses. When authorized, the livestock season of use is 11/1-12/ 1 and 4/1-4/30.

# Antelope Complex Gather Capture Plan and EA

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## Gather Site

During the horse gather it is proposed to utilize a historic gather site, Shafter Well, within the Bluebell WSA. The proposed gather site is located at Shafter Well, in T33N, R67E; Section 12, NWSE (Map 14). The site is currently used as a livestock water development just inside the WSA boundary. Disturbance includes an earthen reservoir, well and pump, a two-track road and a borrow pit. The development was in existence prior to the WSA designation and is a grandfathered use. The original well and pump were installed in 1948. The gather site is proposed because as wild horses are continually captured and subsequently released, they become extremely "educated." The wild horses in the Goshute HMA are reluctant to leave the mountains and the heavy tree cover as they know they are vulnerable. The most efficient and humane way to catch wild horses in the Goshute HMA is to herd them from the high elevations of the mountain into the valley, then when they are moving back into the mountains, to gather them. A gather site oriented to gather the horses as they return to the mountain must be constructed somewhere along the west bench of the Goshute HMA. Because the Bluebell WSA boundary follows the road along the western bench of the Toano and Goshute Mountain Ranges, it is extremely difficult to find a gather site location that doesn't involve portions of the WSA. By utilizing the site at Shafter Well, it would be possible to humanely catch wild horses and prevent impairment to the Bluebell WSA. No gather site activities would occur within the Becky Peak Wilderness, Goshute Peak or South Pequop WSAs. Refer to Appendix D for the operating requirements for the Shafter Well gather site.

BLM Wilderness Study Areas are managed under the Interim Management Policy (IMP) for Lands under Wilderness Review (H-8550-1). According to the IMP, Chapter III, Policies for Specific Activities; Section E, Wild Horse and Burro Management, "The Bureau must endeavor to make every effort **not** to allow populations within WSAs to degrade wilderness values, or vegetative cover as it existed on the date of the passage of FLPMA. Wild horse and burro populations must be managed at appropriate management levels as determined by monitoring activities to ensure a thriving natural ecological balance."



## Antelope Complex Gather Capture Plan and EA

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Bluebell WSA, Shafter Well Proposed gather site. Livestock season of use is 11/1-12/1 and 10/1-4/15.

### **Direct and Indirect Effects of Alternatives**

#### **Proposed Action and Alternative B**

##### Becky Peak Wilderness

Impacts to opportunities for solitude could occur during gather operations due to the possible noise of the helicopter and increased vehicle traffic around the wilderness. Impacts would be short-term in nature, typically only a few days. Those impacts would cease when the gather was completed. No surface impacts within wilderness are anticipated to occur during the gather since all trap sites and holding facilities would be placed outside wilderness. Wilderness values of naturalness after the gather would be enhanced by a reduction in wild horse numbers as a result of an improved ecological condition of the plant communities and other natural resources.

##### Bluebell, South Pequop, Goshute Peak WSAs

Impacts to opportunities for solitude could occur during gather operations due to the possible noise of the helicopter and increased vehicle traffic around the WSAs. Impacts would be short-term in nature, typically only a few days. Those impacts would cease when the gather was completed. However, wilderness values would be positively affected by implementation of the Proposed Action and Alternative B, as it would result in an overall lower number of horses for a longer period of time when compared to the other alternatives. This lower number of horses over a greater period of time would result in an improved ecological condition of the plant communities that are aesthetically

## Antelope Complex Gather Capture Plan and EA

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more appealing to the public, and contributes to the “naturalness” character of the wilderness study areas.

### **Summary of All Alternatives for Wilderness**

The long term protection of wilderness values is the intent for both Wilderness and WSAs. Maintaining AML over the greatest period of time meets the direction of the IMP. Wild horses would still be present in the Becky Peak Wilderness and WSAs but at lower concentrations over different periods of time under each alternative. When comparing alternatives, the Proposed Action maintains AML over the longest time period, returning approximately 427 horses to the range with fertility control on over 80% of the mares and sex ratios of 60% male and 40% female. Next is Alternative B, returning 427 horses with sex ratios of 60% male and 40% female, then Alternative C, returning 427 horses with no other treatment, then Alternative D. Alternative D would return 605 horses to the Spruce Allotment, not including releases in other HMAs, thus exceeding the lower level AML (of 427 total) from the onset and not accounting for free movement of horses between the HMAs.

The gather site within the Bluebell WSA (Shafter Well) could potentially be used in all Alternatives (except the No Action) if the contractor gathering the horses determines that a site at the foothills of the Toano Mountain Range is necessary for gathering. If the site were to be used, specific operating requirements in Appendix D would be utilized. Impacts to the WSA could include additional vegetation trampling outside of the already disturbed areas from horses going into the gather sites and while in the temporary corral. This impact would be temporary and the operating requirements would limit any long term impacts or impairment to the WSA. Compliance with operating requirements would eliminate any impacts to the WSA.

### **Alternative C – Removal Only**

Impacts from Alternative C would temporarily improve conditions within the WSA because the number of excess wild horses in the area would be decreased. However, this decrease in horse numbers would last for a shorter period of time than the Proposed Action and Alternative B due to the fact that the fertility control vaccine would not be used on females under this alternative. As a result, horse numbers would be over AML within four years. This may not allow enough time for re-growth of vegetation at disturbed areas, thus areas would continue to be adversely impacted by the wild horses.

### **Alternative D**

Impacts to the Bluebell and Goshute WSA could be temporarily improved with this alternative as horses numbers would be decreased in all HMAs. However, the South Pequop WSA (within the Spruce Allotment) would continue to be degraded and impacted by wild horse use, especially at water sites because numbers would continue to exceed AML. There are no boundaries between the Spruce Allotment and the other HMAs so the horses above AML remaining in the Spruce Allotment would freely spread throughout the area, eventually impacting all of the other WSAs. This alternative closely

# Antelope Complex Gather Capture Plan and EA

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resembles the No Action, in that excess horses would be present and exceed the carrying capacity for the WSAs.

## **No Action (Alternative E)**

Taking no action would result in an increase in impacts to the WSAs. Excess wild horses would continue to trample spring sources and vegetation surrounding them, and the deterioration would accelerate as wild horse numbers continued to increase. The BLM would need to improve spring sources by other management actions such as fencing and seeding disturbed areas in order to re-vegetate impacted areas in WSAs. Actions such as fencing are not the minimum tool and would introduce more intrusions and man-made features into the landscape. At this point in time, the existing wild horse population is degrading the wilderness values. Failure to remove excess wild horses would be a violation of the BLM's Interim Management Policy for Lands under Wilderness Review (H-8550-1).

## **3.1.9 Cultural Resources**

### **Affected Environment**

Numerous cultural resource inventories have been completed and many cultural resources recorded within the four HMAs (Antelope Complex). However most of the public lands within these HMAs remain un-inventoried and only a fraction of the anticipated cultural resources recorded.

The term cultural resource refers to places of archaeological, architectural, and historical interest. Some of the known or expected cultural resources in the HMAs have historical or architectural significance but most are archaeological in nature and their primary significance is their potential to provide insight into history and prehistory. Most consist of artifact scatters marking the locations of former habitation sites, camps, resource processing, management or procurement locations, transportation features, refuse disposal areas, etc. The following discussion focuses primarily on archaeological resources.

Archaeology is the science that studies past human cultures through the examination and analysis of the material items left behind. Prehistoric sites (i.e., sites dating prior to Euroamerican contact) commonly include artifacts such as projectile points (spear points and arrow points), scraping and cutting tools, pottery, grinding stones, cooking stones, hammerstones, and flaking debris from tool manufacture. Food debris (bone, burned seeds, mussel shell) and features such as cooking hearths, house floors, and storage pits may also be present, but usually are not visible on the surface. Historic sites commonly have tin cans, glass, ceramic, metal and wooden objects, foundations of houses and other structures, etc.

The artifacts and features described above are the raw data upon which archaeological research is based and when analyzed can provide considerable insight into the history of

## Antelope Complex Gather Capture Plan and EA

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the past. However, artifacts and features themselves are but one component of archaeological research. The relationship of the artifacts and features to one another, their location on the landscape and their location within the soil matrix are critical to interpretation of the remnants of these once living cultures. For instance, the 1927 discovery of a spear point (Folsom point) imbedded in the bones of an extinct species of bison provided indisputable proof that humans had arrived in America many millennia earlier than was thought at the time. Had this point been removed or dislodged from the bones prior to documentation, the opportunity to resolve one of the major archaeological issues of that era would have been lost.

Livestock use (including cattle, sheep and both domestic and wild horses) over the last 150 years has likely affected most cultural resources in the HMAs to one degree or another. While we cannot specifically identify the types and extent of impacts to most cultural resources in the four HMAs, experimental research has demonstrated that livestock trampling can damage or break and dislocate artifacts (U.S Army 1990; Roney 1977). Common livestock damage observed at archaeological sites includes trampling, trail formation, wallowing, bedding, soil compaction, vegetation removal, rubbing on structural remains (e.g. using a cabin wall as a scratching post), and bodily waste elimination. These actions can impact or obliterate archaeological stratigraphy, site patterning and features, cause or exacerbate erosion, break and displace or mix artifacts, and contaminate sediments and archaeological organic residues with fecal material and urine (Ataman 1996, Broadhead 1999, U.S Army 1990).

Past impacts within the HMAs are likely to have ranged from minor movement of surface artifacts to severe damage to sites and artifacts. Some of the factors thought to play a part in current cultural resources condition and sensitivity to livestock impacts include soil type, soil moisture, terrain, season of use, grazing history, vegetation cover, and intensity of use.

For the shallow prehistoric archaeological sites typical of much of the Great Basin, intensity of grazing use may be one of the most important factors affecting their current condition. Generally sites further from livestock congregation areas such as water sources, salt and bedding grounds and shelter are assumed to be in better condition than those in proximity to these areas. Given the intense and long term impacts of past livestock, wild horse and wildlife use, unauthorized artifact collection and erosion, surface manifestations of most archaeological sites in the HMAs are probably in fair-good condition at best. Buried archaeological deposits at many of these same sites, on the other hand, are estimated to be in better condition since subsurface materials are typically less affected by surface activities.

Water sources have always been vital to human survival. Both historic and prehistoric archaeological sites are commonly found near springs, seeps and creeks so it is anticipated that cultural resources will be found at most water sources. A review of the cultural resource files shows that 10 springs within the Goshute HMA have been previously inventoried for cultural resources. Archaeological sites are found at nine of these. Unfortunately information regarding site condition is lacking for all but one. In



## Antelope Complex Gather Capture Plan and EA

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this one case, the archaeological site surrounds the spring and has been severely impacted by wild horse use. Other springs in the HMAs are in similar heavily grazed and trampled condition so archaeological sites at or near the springs are likely to have also suffered damage by wild horses.

### **Direct and Indirect Effects of Alternatives**

#### **Effects Common to all Alternatives**

As previously stated, archaeological materials found on the ground surface near water sources or other heavily used areas in the HMAs are likely to have already been subjected to intense trampling and probably have lost much of their integrity. This damage cannot be undone. Ongoing and future damage would be at those sites that still have relatively intact subsurface deposits. Trampling and removal of vegetative cover by overuse results in bare ground and accelerated erosion, which in turn can lead to the subsequent displacement, damage, destruction, and contamination of archaeological remains.

Adverse effects to cultural resources are not always the result of physical impacts. Sometimes, when the significance of a cultural property is in part tied to its setting, feeling, and association, introduction of modern objects can be detrimental. For example, if a historic cabin is significant for its representation of late 1880s homesteading and the viewshed is essentially unchanged from what it was in the 1800s, construction of a transmission line next to it may be considered adverse due the introduction of the new obtrusive element. Given the types of known and expected cultural resources, visual effects are unlikely except if severe grazing and trampling were to substantially alter the vegetative landscape around a cultural resource where setting, feeling, and/or association were an important aspect of its character.

#### **Proposed Action and Alternatives B and C**

Placement of temporary gathering and holding facilities would directly impact any cultural resources found at these location. But in accordance with the SOPs for Gather and Handling Activities in Appendix C, gather facilities would be placed in previously disturbed areas whenever possible. Should new, previously undisturbed gather sites or holding facility locations be required, appropriate cultural resource inventories would be conducted and measures taken to avoid any cultural resource impacts. Therefore, no direct impacts are expected from the Proposed Action or Alternatives B or C.

Reduction in horse numbers is anticipated to lessen erosion, trampling and other damage to cultural resources, particularly for the sites near water sources and those where heavy trailing occurs.

Alternatives B and C, like Alternative A would reduce horse numbers and lessen impacts to cultural resources. However, the decrease in wild horse numbers would be shorter-lived with Alternative C, as herd numbers are anticipated to exceed AML again within

## Antelope Complex Gather Capture Plan and EA

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four years since fertility control vaccines would not be administered. Long-term stabilization of soils is required if impacts to cultural resources are to be curtailed.

### **Alternative D**

#### **Outside the Spruce Allotment**

Placement of temporary gathering and holding facilities would directly impact any cultural resources found at these location. But in accordance with the SOPs in Appendix C, gather facilities would be placed in previously disturbed areas whenever possible. Should new, previously undisturbed gather sites or holding facility locations be required, appropriate cultural resource inventories would be conducted and measures taken to avoid any cultural resource impacts. Therefore, no direct impacts are expected from the Alternative D. Alternative D, like Alternative A would reduce horse numbers and lessen impacts to cultural resources. Reduction in horse numbers is anticipated to lessen erosion, trampling and other damage to cultural resources, particularly for the sites near water sources and those where heavy trailing occurs.

#### **Within the Spruce Allotment**

Wild horse numbers would continue to increase and impacts to cultural resources would rise accordingly. As forage near water sources becomes depleted, horses would need to graze further afield, leading to increased impacts to cultural resources beyond the current areas of intensive use.

### **No Action (Alternative E)**

Wild horse numbers would continue to increase and impacts to cultural resources would rise accordingly. As forage near water sources becomes depleted, horses would need to graze further afield, leading to increased impacts to cultural resources beyond the current areas of intensive use.

### **3.1.10 Health and Safety**

#### **Affected Environment**

In recent gathers, members of the public have increasingly traveled to the public lands to observe BLM's gather operations. Members of the public can inadvertently wander into areas that put them in the path of wild horses that are being herded or handled during the gather operations, creating the potential for injury to the wild horses or burros and to the BLM employees and contractors conducting the gather and/or handling the horses as well as to the public themselves. Because these horses are wild animals, there is always the potential for injury when individuals get too close or inadvertently get in the way of gather activities.

The helicopter work is done at various heights above the ground, from as little as 10-15 feet (when herding the animals the last short distance to the gather corral) to several hundred feet (when doing a recon of the area). While helicopters are highly

# Antelope Complex Gather Capture Plan and EA

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maneuverable and the pilots are very skilled in their operation, unknown and unexpected obstacles in their path can impact their ability to react in time to avoid members of the public in their path. These same unknown and unexpected obstacles can impact the wild horses or burros being herded by the helicopter in that they may not be able to react and can be potentially harmed or caused to flee which can lead to injury and additional stress. When the helicopter is working close to the ground, the rotor wash of the helicopter is a safety concern by potentially causing loose vegetation, dirt, and other objects to fly through the air which can strike or land on anyone in close proximity as well as cause decreased vision.

During the herding process, wild horses or burros will try to flee if they perceive that something or someone suddenly blocks or crosses their path. Fleeing horses can go through wire fences, traverse unstable terrain, and go through areas that they normally don't travel in order to get away, all of which can lead them to injure people by striking or trampling them if they are in the animal's path.

Public observation of the gather activities on public lands will be allowed and would be consistent with BLM IM No. 2010-164 and in compliance with visitation protocols for scheduled and nonscheduled visitation found in Appendix L.

## **Direct and Indirect Effects of Alternatives**

### **Proposed Action and Alternatives B, C and D**

Public safety as well as that of the BLM and contractor staff is always a concern during the gather operations and would be addressed through Observation Protocols that have been used in recent gathers to ensure that the public remains at a safe distance and does not get in the way of gather operations. Appropriate BLM staffing (public affair specialists and law enforcement officers) will be present to assure compliance with visitation protocols at the site. These measures minimize the risks to the health and safety of the public, BLM staff and contractors, and to the wild horses themselves during the gather operations.

Disturbances in and around the gather and holding corral have the potential to cause a wild horse to injure the government personnel and/or contractor staff who are trying to sort, move and care for the horses by causing them to be kicked, struck, and possibly trampled by the animals. Such disturbances also have the potential for similar harm to the public.

### **Alternative E**

There would be no safety concerns to BLM employees, contractors and the general public from gather operations as no gather activities would occur.

## **3.2 Cumulative Impacts**

The Council on Environmental Quality (CEQ) regulations define cumulative impacts as: "[T]he impact on the environment which results from the incremental impact of the

## Antelope Complex Gather Capture Plan and EA

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action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions.” Analysis of cumulative impacts considers related past, present and reasonably foreseeable future actions that would affect the resource of concern.

### 3.2.1 Related Past, Present and Reasonably Foreseeable Future Actions (PPRFFAs)

The related past, present and reasonably foreseeable future actions applicable to the project area are identified in Table 8 below.

**Table 8. The Past, Present, and Reasonably Foreseeable Future Actions**

Issue-Project-Name or Description	Status		
	Past	Present	Future
Issuance of decisions and grazing permits for ranching operations through the allotment evaluation process/standards and guidelines assessment and the reassessment of the associated allotments	X		X
Livestock grazing	X	X	X
Wild Horse and Burro Gathers	X	X	X
Mineral Exploration / Geothermal Exploration/Abandoned mine land reclamation	X	X	X
Southwest Intertie Project			X
Recreation	X	X	X
Spring development (fencing water sources)	X	X	X
Wildlife guzzler construction	X	X	X
Invasive weed inventory/treatments	X	X	X
Wild Horse and Burro issues, issuance of Multiple use decisions, AML adjustments and planning	X		X
Wildfire and Emergency stabilization and rehabilitation	X	X	X
Wildlife Issues: Expanding elk population		X	X

The following are considered to be the primary past and present and reasonably foreseeable actions: dispersed recreation; drought, wildfire, wildfire suppression, fuel



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## Antelope Complex Gather Capture Plan and EA

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break and wildlife/range rehabilitation efforts; wildlife habitat improvement projects; expanding elk population, minerals exploration; possible increased use of Northern Nevada rail line, South West Intertie Project (major transmission line), possible wild horse sanctuary around Spruce Mountain, renewable energy (Schell Field Office), invasive and non-native weed species, livestock grazing, and wild horse gathers.

### 3.2.2 Cumulative Effects Study Areas (CESAs)

CESAs are used to define the geographic scope of PPRFFAs to provide context for analysis of cumulative impacts on a resource. The CESAs for the resources affected by the primary PPRFFAs are outlined in Table 9 below.

**Table 9. Resources and Cumulative Effects Study Areas**

<b>Resource</b>	<b>Cumulative Effects Study Area (CESA)</b>
Wild Horses	The CESA for Wild Horses includes the Antelope Complex and immediately surrounding areas.
Soils	The CESA for Soils includes the Antelope Complex and immediately surrounding areas.
Water Resources	The CESA for Water Resources includes the Antelope Complex and immediately surrounding areas.
Fisheries and Riparian Zones	The CESA for Fisheries and Riparian Zones includes the Antelope Complex and immediately surrounding areas.
Vegetation	The CESA for Vegetation includes the Antelope Complex and immediately surrounding areas.
Wildlife Species, Special Status Species and Migratory Birds and their Habitat	The CESA for Wildlife Species, Special Status Species and Migratory Birds and their Habitat includes the Antelope Complex and immediately surrounding areas.
Wilderness	The CESA for Wilderness and Wilderness Study Areas includes the Antelope Complex and immediately surrounding areas.
Livestock Grazing	The CESA for Livestock Grazing includes the Antelope Complex and immediately surrounding areas.
Cultural Resources	The CESA for Cultural Resources includes the Antelope Complex and immediately surrounding areas.

# Antelope Complex Gather Capture Plan and EA

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## 3.2.3 Cumulative Impacts to Resources

### Impacts Related to Proposed Action and Alternatives B and C

Because the indirect and direct impacts to Wild Horses, Soils, Water, Riparian Zones, Vegetation, Wildlife Species, Special Status Species and Migratory Birds and their Habitat, WSAs, Livestock Grazing, and Cultural are all positive, there are no cumulative impacts of concern. Numbers of wild horses under the Proposed Action and Alternatives B and C are slightly different at the end of ten years. Therefore, the indirect and direct impacts as well as the cumulative impacts are slightly different in magnitude; however the difference is slight. The Proposed Action results in more beneficial cumulative impacts, and Alternative C has a lesser rate of beneficial cumulative impacts of these three alternatives.

Cumulative effects, when incrementally adding any of the these three action alternatives to the past, present, and reasonably foreseeable actions within the CESAs would include continued improvement of upland and riparian vegetation and soils conditions, which would in turn benefit current livestock management, native wildlife including sensitive species, water resources, cultural resources and wild horses populations as forage (habitat) quantity and quality is improved over the current level. Benefits from reduced wild horse populations would include fewer animals competing for limited water at the limited number of water sources present in the area. Cumulatively there should be more stable wild horse populations, healthier rangelands, healthier wild horses, and fewer multiple use conflicts within the cumulative area over the short and long-term. Gathering and removing excess wild horses from the Antelope Complex and removal of wild horses outside of the Antelope Complex would also likely benefit resources in the adjoining areas, as horses in the Antelope Complex would not need to travel outside of the HMAs in search of additional forage, water and space due to overpopulation.

Cumulatively over the next 10-15 year period, continuing to manage wild horses within the established AML ranges would result in improved vegetation condition (i.e. forage availability and quantity), which in turn would result in improved vegetation density, cover, vigor, seed production, seedling establishment and forage production over current conditions. Increased coordinated management of wild horses over the entire CESA would allow free roaming behavior amongst existing herds and therefore lead to a thriving natural ecological balance. Managing wild horse populations within the established AMLs would allow the primary forage plant species to recover more rapidly and allow for improvements to riparian habitat, even though some vegetation conditions may never be able to return to their potential. Maintaining AMLs over a sustained period of time throughout the CESA would allow for the collection of scientific data to evaluate AML levels.

Cumulatively over the next 10-15 years, fewer gathers should result in less frequent disturbance to individual wild horses and the herd's social structure. Individual and herd health would be maintained. Some movement of wild horses across HMA boundaries within the CESA would be expected but should not result in non-attainment of identified

## Antelope Complex Gather Capture Plan and EA

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AML ranges and other management objectives if excess horses are removed from the Antelope Complex.

By removing excess wild horses, BLM will be able to gather a higher percentage of the total wild population in future gathers for fertility control treatments and sex ratio adjustments in an effort to slow population growth and to reduce the need to remove excess wild horses from the range, and number of excess wild horses that must be removed. However, the gather and release of wild horses back into the HMA may lead to the decreased ability to gather horses in the future as released horses learn to evade the helicopter by taking cover or temporarily moving outside the HMA until gather activities cease.

### **Impacts Related to Alternative D (Spruce Alternative)**

Under Alternative D, the wild horse population within the Spruce Allotment would continue to exceed the identified AML for the Spruce Allotment. Population growth of wild horses would be slowed, but not stopped as some wild horses would not be gathered. Increased movement of horses from the Spruce Allotment to adjacent areas would be expected as the ever greater numbers of horses search for sufficient resources and habitat for survival, thus impacting larger areas of public lands within the CESA and outside of the Spruce Allotment. Heavy utilization of available forage and insufficient water would be expected. Wild horses, wildlife and livestock would eventually not have sufficient forage or water, especially in dry years. Ecological communities and habitat resources would not be sustainable. Rangeland health would degrade, possibly below biological thresholds, making recovery unlikely if not impossible as halogeton, cheatgrass, and other invasive non-native species could dominate the understory.

Emergency removals of wild horses could be expected and would likely be necessary in order to prevent horses from suffering or dying as a result of insufficient forage and water. These emergency removals could occur as early as summer 2011 if the area experiences normal or below normal precipitation.

Over-utilization of vegetation and other habitat and adverse impacts to cultural resources would occur as wild horse populations continued to increase. Wild horse populations would need to be gathered, treated and released every three years to maintain approximately 600 wild horses on the Spruce Allotment; however wild horse, livestock, and wildlife would all experience suffering and possible death as rangeland resources continued to degrade.

With regards to cumulative impacts, Alternative D is the second most damaging of the alternatives (after the No Action Alternative) to biological and physical resources within the Spruce Allotment and the CESA because the impacts of Alternative D are similar to the No Action Alternative but of a lesser magnitude.

### **Impacts related to Alternative E (No Action)**

Under the No Action alternative, the wild horse population in the Antelope Complex could exceed 4,300 head in about four years. Increased movement of horses outside the

## Antelope Complex Gather Capture Plan and EA

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boundaries of the Antelope Complex would be expected as the ever greater numbers of horses search for sufficient resources and habitat for survival, thus impacting larger areas of public lands within the CESA. Heavy utilization of available forage and insufficient water for the over population of wild horses would be expected. Allowing the wild horse population to continue to grow beyond the current population numbers would be likely to result in a population crash during the next decade. Wild horses, wildlife and livestock would not have sufficient forage or water. All animals would experience suffering and possible death. Ecological communities and habitat resources would not be sustainable. Rangeland health would degrade, possibly below biological thresholds, making recovery unlikely if not impossible as halogeton, cheatgrass, and other invasive non-native species could dominate the understory degrading ecological conditions.

Emergency removals could be expected in order to prevent individual animals from suffering or death as a result of insufficient forage and water. These emergency removals could occur as early as this summer season if the area experiences normal or below normal precipitation. There is also a high likelihood that emergency actions would be needed beyond the summer season if the current dry conditions persist through the upcoming summer (2011). During emergency conditions, competition for available forage and water resources is heightened and generally impacts the older and youngest horses as well as lactating mares first. These groups would experience significant weight loss and diminished health, which could result in prolonged suffering and their eventual death. If emergency actions are not taken (prior to or in response to these events), the overall population could be affected by severely skewed sex ratios towards stallions (generally the strongest and healthiest portion of the population) and a severely altered age structure. In addition, habitat resources would be over-utilized and progress toward meeting rangeland health standards would not be met.

Cumulative impacts would result in foregoing an opportunity to improve rangeland health and to properly manage wild horses in balance with the available water and forage. Over-utilization of vegetation and other habitat and adverse impacts to cultural resources would occur as wild horse populations continued to increase further in excess of AML. Wild horse populations would be expected to eventually crash at some ecological threshold; however wild horse, livestock, and wildlife would all experience suffering and possible death as rangeland resources continued to degrade. Attainment of RMP/FMUD objectives and Standards for Rangeland Health and Wild Horse and Burro Populations would not be achieved.

Under the No Action Alternative, AML would not be achieved or sustained throughout the CESA, and therefore the collection and analysis of scientific data necessary to evaluate AML levels, in relationship to rangeland health standards and whether a thriving natural ecological balance is being met or achieved, could not be undertaken.

The cumulative impacts of Alternative E (No Action) are all negative and are increasingly negative as wild horse numbers further increase each year and as the wild horses expand their range in search of increasingly scarce forage and water.



# Antelope Complex Gather Capture Plan and EA

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## 3.3 Mitigation and Monitoring

The SOPs that would be implemented for the Proposed Action and Alternative B and C would address all impacts of concern; therefore there is no proposed mitigation.

Ongoing rangeland monitoring within the Antelope Complex would continue as outlined in the Sensitive Bird Species EIS, and relevant Final Multiple Use Decisions and the Wells RMP 1985, Wells RMP Wild Horse Amendment 1993, and Ely RMP 2008. Studies will be conducted in accordance with BLM policy manual guidance as outlined in the Nevada Rangeland Monitoring Handbook and will include, but are not limited, to the following:

### Uplands:

- Forage production
- Ecological condition
- Trend frequency
- Utilization
- Actual use
- Upland proper functioning condition assessment
- Ecological Site Inventory
- Cover

### Riparian:

- Proper Function Condition Assessments (BLM TR 1737-16, BLM TR 1737-15)
- Stream Surveys (BLM TR 6670 and 6720-1)

### Water:

- Water temperature
- Water quality samples
- Air temperature

### Wildlife Habitat:

- Condition studies
- Cole browse
- Utilization
- Condition studies, (BLM Manual 6630)
- Wildlife population census/habitat delineation maps (NDOW)

### Wild Horses:

The BLM COR and PIs assigned to the gather would be responsible for insuring contract personnel abide by contract specifications and SOPs. Ongoing rangeland, riparian, and wild horse monitoring would continue, including periodic aerial population inventory counts.

Should the Proposed Action gather efficiency exceed 80%, allowing for selective removal and release of and wild horses back into the HMAs, fertility control monitoring

# Antelope Complex Gather Capture Plan and EA

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would be conducted in accordance with the SOPs outlined in Appendix A and monitoring of the herd's social behavior would be incorporated into routine monitoring.

## **4 CONSULTATION AND COORDINATION**

### **4.1 General Information**

Public hearings are held annually on a state-wide basis regarding the use of helicopters and motorized vehicles to capture wild horses (or burros). During these meetings, the public is given the opportunity to present new information and to voice any concerns or opinions regarding the use of these methods to capture wild horses (or burros). A meeting on the state wide use of helicopters and motorized vehicles to capture wild horses and burros was held at the Elko District Office on July 1, 2010. Several written comments were entered into the record for this hearing. Specific opinions expressed or issues identified included: (1) the use of helicopters and motorized vehicles is inhumane and results in injury or death to significant numbers of wild horses and burros; (2) the use of helicopters and motorized vehicles is more humane, effective, and efficient, and results in less injury or death to significant numbers of wild horses and burros; (3) inventory methods using helicopters and fixed wing aircraft; (4) reported reproduction and mortality rates; (5) providing the public with pertinent information regarding gather plans at site-specific locations; (6) statistics or statements relating to impacts of helicopter driving, distances, terrain, etc. on wild burro herds; (7) studies on impacts to wild horses and burros on the use of helicopters and helicopter driving during gather. BLM reviewed its Standard Operating Procedures in response to the views and issues brought up at the public meeting and determined that no changes to the SOPs were warranted.

### **4.2 Scoping and Issue Identification**

A scoping letter for the Antelope Complex was sent to 142 interested individuals, groups, and agencies on December 14, 2009, regarding the proposed removal of excess horses from the Antelope Complex HMA. Letters or e-mails were received from 21 individuals and groups during the 45 day comment period. In an attempt to reach a wider audience the BLM subsequently issued a press release on January 13, 2010. On January 19, 2010, the BLM received a request from In Defense for Animals for a 60 day extension to the December 14, 2009 scoping letter. On January 21, 2010 the BLM granted an extension until February 12, 2010. Beginning February 10 through February 12 the BLM received 8,161 comment form letters. Some members of the public submitted up to five comment form letters often repeating what they had already submitted. Those comments that were duplicates were not accepted.

The following issues were identified as a result of public and internal scoping and agency consultation, and were used to analyze the alternatives:

1. Impacts to individual wild horses and the herd from proposed capture, removal and handling procedures. Measurement indicators for this issue include:

# Antelope Complex Gather Capture Plan and EA

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- Projected population size and annual growth rate (WinEquus population modeling)
  - Expected impacts to individual wild horses from handling stress
  - Expected impacts to herd social structure
  - Expected effectiveness of proposed fertility control application
  - Potential effects to genetic diversity
  - Potential impacts to animal health and condition
2. Impacts to potentially affected critical and other elements of the human environment (**Vegetation; Wildlife, Migratory Birds, and Special Status Species**) from proposed capture and removal. Measurement indicators for this issue include:
- Potential for temporary displacement, trampling or disturbance
  - Potential competition for forage and water over time (expected change in actual forage utilization by wild horses)
  - Expected impacts to range condition over time

The preliminary Antelope Complex Gather Capture Plan and EA was made available to the public for review and comment on the Elko District BLM website for 30 days, from September 20, 2010 to October 19, 2010. Letters were mailed to interested public on September 17, 2010 to inform them when the EA would be available for review and comment, how to access the document and how to submit comments. Comments, alternatives and/or recommendations received during the review and comment period were fully considered, evaluated, noted and incorporated where applicable. See Appendix M for a summary of comments received on the EA and responses to comments.

## 4.3 Issues Not Addressed

The scope of this environmental assessment is limited to the need to manage the HMAs within the Antelope Complex for a thriving natural ecological balance by removing excess wild horses from the Antelope Complex and implementing fertility control and/or sex ratio adjustments in order to slow annual growth rates. These actions are needed to extend the time between gathers, reduce impacts to individual horses and the herds and to achieve and maintain the AMLs and protect the range from the deterioration associated with the current overpopulation. Some comments received from the public in response to public scoping and review of the preliminary EA are outside the scope of this EA and were not considered by BLM in finalizing this EA. See Appendix M for comments received on the EA and responses to comments.

## 4.4 Coordination with Other Agencies

A letter was received from the Nevada State Historic Preservation Officer concurring with the proposed gather.

The Commission for the Preservation of Wild Horses supports the proposed gather.

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# Antelope Complex Gather Capture Plan and EA

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## 4.5 Native American Consultation

A Native American scoping letter for the Antelope Complex was mailed on January 12, 2010. A comment letter was received from the Duckwater Shoshone Tribe requesting that previously disturbed sites be used for gather activities.

A Native American comment letter for the Antelope Complex was mailed on September 17, 2010. A comment letter was received after the closing of the comment period from the Duckwater Shoshone Tribe expressing concern over the season of the gather.

## 4.6 Preparers

### Elko District Office

Bruce Thompson	Wild Horses, Elko District Office
Terri Dobis	Rangeland Management
Derrick Holdstock	Wildlife, Migratory Birds, BLM Special Status Species and Their Habitat
Donna Jewell	Supervisory Natural Resource Specialist
Kirk Laird	Environmental Coordinator
Mark Dean	Soils and Water Quality and Riparian
Tamara Hawthorne	Visual Resource Management and Wilderness
Tim Murphy	Cultural Resources
Tyson Gripp	Noxious Weeds

### Ely District Office

Ben Noyes	Wild Horses, Schell Field Office
Brett Covlin	Rangeland Management Specialist
Nancy Williams	Wildlife, Migratory Birds, BLM Special Status Species and their Habitat

### Nevada State Office

Alan Shepherd	Wild Horses, Nevada State Office
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### National Program Office

Susie Stokke	Wild Horses, National Program Office
Bea Wade	Wild Horses, National Program Office

## 4.7 Distribution

This EA was made available for public viewing on the BLM public web site at:  
[http://www.blm.gov/nv/st/en/fo/elko\\_field\\_office/blm\\_information/nepa.html](http://www.blm.gov/nv/st/en/fo/elko_field_office/blm_information/nepa.html).

A notice of availability and/or or hard copies of this EA was also sent to those on the following list who either commented during scoping, commented during the review and comment period, are interested public, and/or requested a copy of the EA.



## Antelope Complex Gather Capture Plan and EA

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7H RANCH LLC  
ANIMAL PROTECTION INSTITUTE OF AMERICA  
ANIMAL RIGHTS LAW CENTER  
ANIMAL WELFARE INSTITUTE  
BAILEY, HALE  
BAILEY, ROBIN  
BATEMAN, KYLE W  
BOSS TANKS INC  
BOWLEN, WESLEY  
BROUGH, FERRIS & MARLENE  
BROUGH, WILDE  
BUSH, MARY L  
CHOURNOS, INC  
CHOURNOS, STEVEN A & DANIEL S  
CITIZENS AGAINST RECREATION EVICTION USA  
CL CATTLE COMPANY, LLC  
COLLORD, LETA  
CONGRESSMAN DEAN HELLER  
COWBOY JOHN TOURS  
CROOK, SHARON  
CUSHMAN, KATHRYN M  
DAWLEY CREEK RANCH  
DBA NEED MORE SHEEP COMPANY  
DIXIE VALLEY CATTLE, LLC  
DOUBLE U LIVESTOCK, LLC  
DOWNER, CRAIG C  
EDINGTON, CHAD & CHILD, ROBERT  
EGBERT, F SCOTT & LAUREL S  
ELKO COUNTY COMMISSIONERS  
ELLISON RANCHING COMPANY  
ELY DISTRICT RANGE  
ENCL  
EUREKA COUNTY DEPT OF NATURAL RESOURCES  
FLAT TOP SHEEP COMPANY  
FRIENDS OF NEVADA WILDERNESS  
FRONTEER DEVELOPMENT USA, INC  
FULSTONE, STEVEN  
GORING, SHERIE RAE  
GREAT BASIN ECOLOGY, INC  
GREAT BASIN NATIONAL PARK  
H&R LIVESTOCK  
HAROLD ROTHER FARMS, INC  
HENNESSY, EILEEN  
HIGBEE, VAUGH  
HOLLAND & HART, LLP  
HONORABLE HARRY REID  
HONORABLE JOHN ENSIGN  
HOOTS, DAN L  
HOOTS, MARTHA P  
IN DEFENSE OF ANIMALS  
BOWERS, JACK & TERRY

## Antelope Complex Gather Capture Plan and EA

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LEAR, KAY S  
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MC QUEARY, NEIL & KRISTIN  
MERKLEY, KENNY  
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MONOLETTI, THERESA  
MORI RANCHES  
NANNINI, CLAY  
NAPPE, TINA  
NATIONAL MUSTANG ASSOC, INC  
NATIONAL WILD HORSE ASSOC  
NATIONS, JEANE  
NATURAL RESOURCES DEFENSE COUNCIL  
NATURAL RESOURCES MANAGEMENT ADVISORY COUNCIL  
NDOW  
NEFF, JOHN  
NEVADA CATTLEMEN'S ASSOC  
NEVADA FARM BUREAU FEDERATION  
NEVADA FIRST CORP  
NEVADA HIGH COUNTRY TOURS  
NEVADA OUTDOOR RECREATION ASSOC  
NEVADA RANCH SERVICE  
O'DOWD, PATIENCE  
OSTER, SHERRY  
OTS, LLC  
OVERLAND LAND & LIVESTOCK  
PARKER, GAIL  
PAUL, PATRICIA & LANA  
PAYTON, CALLAN W  
PELTER RANCH  
PEPPERTREE, LLC  
PEQUOP CONSERVANCY, LLC  
PINE VALLEY SHEEP RANCH, INC  
PRUNTY, MARGE  
PUBLIC LANDS FOUNDATION  
RAN, TURNER & IRLBECK  
RAWLEY, LEONA  
RED ROCK AUDUBON SOCIETY  
REEVES, ELNOMA  
RESOURCE CONCEPTS, INC

## Antelope Complex Gather Capture Plan and EA

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SPIVACK, ROBIN  
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STENINGER, REX  
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THE FUND FOR ANIMALS, INC  
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URS CORP  
US FISH & WILDLIFE SERVICE  
US FOREST SERVICE  
WALKER, SANDRA  
WALLINGFORD, GOLDE  
WALTER, JACK & IRENE  
WARNER, BARBARA  
WATSON, CHARLES JR & NORA  
WEST, WADE  
WESTERN WATERSHEDS PROJECT  
WHITE PINE CO COMMISSIONERS  
WILD HORSE COMMISSION  
WILD HORSE ORGANIZED ASSISTANCE  
WILD HORSE SANCTUARY  
WILD HORSE SPIRIT  
WILD UTAH PROJECT  
WILDERNESS IMPACT RESEARCH FOUNDATION  
WILDLIFE CONSULTANT  
WINES, BUSTER & GWEN  
WINES, STERLING  
BATTLE MOUNTAIN BAND COUNCIL  
ELKO BAND COUNCIL  
GOSHUTE BUSINESS COUNCIL  
SOUTH FORK BAND COUNCIL  
TE-MOAK TRIBAL COUNCIL  
WELLS BAND COUNCIL  
DUCK VALLEY SHOSHONE TRIBE  
ELY SHOSHONE TRIBE  
YOMBA SHOSHONE TRIBE

# Antelope Complex Gather Capture Plan and EA

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## 4.8 References

- Ataman, Kathryn. 1996. A Short Position Paper Supporting Incorporation of Effects of Grazing Practices on Cultural Resources Located on Public lands in BLM Grazing Standard and Guidelines. Prepared for NE Nevada RAC.
- Bergwall, Frank. 2010. Memorandum on Excessive Use by Wild Horses at Mining Reclamation and Re-Vegetation Sites in the Dolly Varden Range.
- BLM. 1985. Draft Wells Resource Area Resource Management Plan and Environmental Impact Statement. U. S. Department of the Interior, Bureau of Land Management, Elko District. Elko, Nevada.  
[www.blm.gov/nv/st/en/fo/elko\\_field\\_office/blm\\_programs/planning.1.html](http://www.blm.gov/nv/st/en/fo/elko_field_office/blm_programs/planning.1.html)
- BLM. 1995. H-8550-1, Interim Management Policy for Lands Under Wilderness Review, Rel. 8-67.
- BLM. 2000. Nevada Wilderness Study Area Notebook, Elko Field Office
- BLM. 2008. Ely District Resource Management Plan and Environmental Impact Statement. U.S. Department of the Interior, Bureau of Land Management, Ely District. Ely, Nevada.  
[www.blm.gov/nv/st/en/fo/ely\\_field\\_office/blm\\_programs/planning/approved\\_plan\\_and.html](http://www.blm.gov/nv/st/en/fo/ely_field_office/blm_programs/planning/approved_plan_and.html)
- Broadhead, Wade. 1999. Cattle, Control, and Conservation. In Cultural Resource Management, U.S.D.I. National Park Service.
- Cothran, E. Gus. 2002a. Genetics Analysis of the Antelope, NV Feral Horse Herd.
- Cothran, E. Gus. 2002b. Genetics Analysis of the Antelope Valley, NV Feral Horse Herd.
- Cothran, E. Gus. 2002c. Genetics Analysis of the Goshute, NV Feral Horse Herd.
- Cothran, E. Gus. 2004. Genetics Analysis of the Spruce-Pequop, NV Feral Horse Herd.
- Holechek, J.L. 1988. An Approach for Setting the Stocking Rate, Rangelands 10(1).
- HSUS, 2009. Is PZP Safe? Immunocontraceptive Vaccines and their Regulation.  
[http://humanesociety.org/issues/wildlife\\_overpopulation/facts/is\\_pzp\\_safe.html](http://humanesociety.org/issues/wildlife_overpopulation/facts/is_pzp_safe.html)
- HSUS, 2009. Questions and Answers about Immunocontraception.  
[http://humanesociety.org/issues/wildlife\\_overpopulation/qa/q\\_and\\_a\\_pzp.html](http://humanesociety.org/issues/wildlife_overpopulation/qa/q_and_a_pzp.html)



## Antelope Complex Gather Capture Plan and EA

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- HSUS. 2010. Letter to BLM, signed by Stephanie Boyles, Wildlife Scientist with the HSUS transmitting comments to the BLM on the BLM Wild Horse and Burro Strategy Document.  
[www.humanesociety.org/assets/wild\\_horse\\_burro\\_manage\\_HSUS\\_comments\\_090310.pdf](http://www.humanesociety.org/assets/wild_horse_burro_manage_HSUS_comments_090310.pdf)
- Kirkpatrick, J.F., I.K.M. Liu, and J.W. Turner, Jr. 1990. Remotely-delivered immunocontraception in feral horses. *Wildlife Society Bulletin* 18:326-330.
- Kirkpatrick, J.F., I.K.M. Liu, J.W. Turner, Jr., and M. Bernoco. 1991. Antigen recognition in mares previously immunized with porcine zona pellucidae. *Journal of Reproductive Fertility* (Supplement 44):321-325.
- Kirkpatrick, J.F., I.K.M. Liu, J.W. Turner, Jr., R. Naugle, and R. Keiper. 1992. Long-term effects of porcine zona pellucidae contraception on ovarian function in feral mares. *Journal of Reproductive Fertility* 94:437-444.
- Kirkpatrick, J.F. 1995. Management of Wild Horses by Fertility Control: The Assateague Experience. National Park Service Scientific Monograph, National Park Service, Denver, CO. (60 pp.).
- Kirkpatrick, J.F., R. Naugle, I.K.M. Lui, J. W. Turner Jr., M. Bernoco. 1995. Effects of Seven Consecutive years of PZP Contraception on Ovarian Function in Feral Mares, *Biology of Reproduction Monograph Series 1: Equine Reproduction VI*: 411-418.
- Kirkpatrick, J.F., R. Naugle, I.K.M. Liu, M. Bernoco, and J.W. Turner, Jr. 1995a. Effects of seven consecutive years of porcine zona pellucida contraception on ovarian function in feral mares. *Biology of Reproduction, Monograph Series 1: Equine Reproduction*: 411-413.
- Kirkpatrick, J.F., I.K.M. Liu, and J.W. Turner, Jr. 1996a. Contraception of wild and feral equids. In: *Contraception in Wildlife Management*. T.J. Kreeger (ed). U.S. Government Printing Office, Washington, DC. pp. 161-169.
- Kirkpatrick, J.F., J.W. Turner, Jr., I.K.M. Liu, R.A. Fayrer-Hosken (1996b). Applications of pig zona pellucida immunocontraception to wildlife fertility control. *Journal of Reproductive Fertility* (Supplement 51):183-189.
- Kirkpatrick JF, Turner A. 2002. Reversibility of action and safety during pregnancy of immunization against porcine zona pellucida in wild mares (*Equus caballus*). *Reprod Suppl.* 60:197-202.
- Kirkpatrick, J.F., and A. Turner. 2003. Absence of effects from immunocontraception on seasonal birth patterns and foal survival among barrier island horses. *Journal of Applied Animal Welfare Science* 6: 301-308.

## Antelope Complex Gather Capture Plan and EA

---

- Kirkpatrick, J.F., Rutberg, A.T., Coates-Markle, L. 2010. Immunocontraceptive Reproductive Control Utilizing Porcine Zona Pellucida (PZP) in Federal Wild Horse Populations (Third Edition). The Science and Conservation Center, Zoo Montana, Billings Montana. [http://www.zoomontana.org/wp-content/uploads/pzp\\_q\\_and\\_a.pdf](http://www.zoomontana.org/wp-content/uploads/pzp_q_and_a.pdf)
- Lasley, B.L. and J.F. Kirkpatrick. 1991. Monitoring ovarian function in captive and free-ranging wildlife by means of urinary fecal steroids. *Journal of Zoo and Wildlife Medicine* 22:23-31.
- Liu, I.K.M., M. Bernoco, and M. Feldman. 1989. Contraception in mares heteroimmunized with porcine zonae pellucidae. *Journal of Reproductive Fertility* 89:19-29.
- Madosky, J.M., Rubenstein, D.I., Howard, J.J., Stuska, S. In press. The effects of immunocontraception on harem fidelity in a feral horse (*Equus caballus*) population. *Applied Animal Behaviour Science*.
- McAdoo, Caleb. 2010. Letter documenting Field Trip Report – Spruce Mountain wild horse and elk competition. Wildlife Biologist, Nevada Department of Wildlife, Elko, Nevada.
- Nunez, C.M.V., Adelman, J.S., Mason, C., Rubenstein, D.I. 2009. Immunocontraception decreases group fidelity in a feral horse population during the non-breeding season. *Applied Animal Behaviour Science* 117:74–83.
- Powell, D.M. 1999. Preliminary evaluation of porcine zona pellucida (PZP) immunocontraception for behavioral effects in feral horses (*Equus caballus*). *Journal of Applied Animal Welfare Science* 2:321–335.
- Prichard, Don. 1999. Riparian Area Management. A user guide to assessing proper functioning condition and the supporting science for lentic areas. Technical Reference 1737-16. U.S. Dept. Interior, BLM, Denver, CO.
- Ransom, J.I., Cade, B.S., Hobbs, N.T. 2010. Influences of immunocontraception on time budgets, social behavior, and body condition in feral horses. *Applied Animal Behaviour Science* 124:51–60.
- Shumake, S.A., Wilhelm, E.S. 1995. Comparisons of effects of four immunocontraceptive treatments on estrous cycle and rutting behavior in captive white-tailed deer. Denver Wildlife Research Center, Colorado, USA.
- Roney, John. 1977. Livestock and Lithics: The Effects of Trampling on a Lithic Scatter. On file at Winnemucca District, United States Department of the Interior, Bureau of Land Management.

# Antelope Complex Gather Capture Plan and EA

---

- Stoddart, Laurence A., et. al. 1975. Range Management, Third Edition. McGraw-Hill, New York, NY, USDA Forest Service.
- Turner, Jr., J.W., I.K.M. Liu, A.T. Rutberg, and J.F. Kirkpatrick. 1996a. Immunocontraception limits foal production in free-roaming feral horses in Nevada. *Journal of Wildlife Management* 61:873-880.
- Turner Jr., J.W., I.K.M. Lui, Rutberg, A., J.W., Kirkpatrick. 1997. Immunocontraception Limits Foal Production in Free Roaming Feral Horses in Nevada, *Journal of Wildlife Management*. 61 (3):873-880.
- Turner, A., Kirkpatrick, J.F. 2002. Effects of immunocontraception on population, longevity and body condition in wild mares (*Equus caballus*). *Reproduction Supplement* 60:187-195.
- Turner, J.W., Lui, I.K.M., Flanagan, D.R., Rutberg, A.T., J.W., Kirkpatrick. 2007. Immunocontraception in the Wild Horses: One Inoculation Provides Two Years of Infertility. *Journal of Wildlife Management* 71 (2):662-667.
- USDA. 1989. Facilities for Watering Livestock and Wildlife. Forest Service Technology Development Center, Missoula, MT.
- United States Department of Agriculture Natural Resources Conservation Service (NRCS) Plant Guide, Winterfat
- United States Government Accountability Office. 2008. Report to the Chairman, Committee on Natural Resources, House of Representatives -- Bureau of Land Management: Effective Long-Term Options Needed to Manage Unadoptable Wild Horses. GAO-09-77.
- U.S. Army Corps of Engineers. 1990. Archeological sites protection and preservation notebook: Technical Notes. Impacts of domestic livestock grazing on archaeological resources. U.S. Army Engineer Waterways Experiment Station. 3903 Halls Ferry Road, Vicksburg, MS 39280-6199.
- Valentine, John F. 1980. Range Development and Improvements, Second Edition 1980.
- White Pine County. 2007. White Pine County Elk Management Plan, Revised 2007. White Pine County Coordinated Resource Management Steering Committee, White Pine County, Nevada.
- White Pine County. 2007 White Pine County Public Lands Policy Plan. White Pine County Public Land Users Advisory Committee, White Pine County, Nevada.

## Antelope Complex Gather Capture Plan and EA

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Willis, P., G.L. Heusner, R.J. Warren, D. Kessler, and R.A. Fayrer-Hosken. 1994. Equine immunocontraception using porcine zona pellucida: A new method for remote delivery and characterization of the immune response. *Journal of Equine Veterinary Science* 14:364-370.



# Antelope Complex Gather Capture Plan and EA

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## Appendix A

### Standard Operating Procedures for Population Level Fertility Control Treatments

The following are implementation and monitoring requirements for the PZP vaccine.

#### 22-month time-release pelleted vaccine:

The following implementation and monitoring requirements are part of the Proposed Action:

1. PZP vaccine would be administered only by trained BLM personnel or collaborating research partners.
2. Mares that have never been treated would receive 0.5 cc of PZP vaccine emulsified with 0.5 cc of Freund's Modified Adjuvant (FMA). Mares identified for re-treatment receive 0.5 cc of the PZP vaccine emulsified with 0.5 cc of Freund's Incomplete Adjuvant (FIA).
3. The fertility control drug is administered with two separate injections: (1) a liquid dose of PZP is administered using an 18-gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14-gauge needle. These are delivered using a modified syringe and jabstick to inject the pellets into the gluteal muscles of the mares being returned to the range. The pellets are designed to release PZP over time similar to a time-release cold capsule.
4. Delivery of the vaccine would be by intramuscular injection into the gluteal muscles while the mare is restrained in a working chute. The primer would consist of 0.5 cc of liquid PZP emulsified with 0.5 cc of Freund's Modified Adjuvant (FMA). The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid or pellets would be injected into the left hind quarters of the mare, above the imaginary line that connects the point of the hip (hook bone) and the point of the buttocks (pin bone).
5. In the future, the vaccine may be administered remotely using an approved long range darting protocol and delivery system if or when that technology is developed.
6. All treated mares will be freeze-marked on the hip or neck HMA managers to positively identify the animals during the research project and at the time of removal during subsequent gathers.

#### Monitoring and Tracking of Treatments:

1. At a minimum, estimation of population growth rates using helicopter or fixed-wing surveys will be conducted before any subsequent gather. During these surveys it is not necessary to identify which foals were born to which mares; only an estimate of population growth is needed (i.e. # of foals to # of adults).
2. Population growth rates of herds selected for intensive monitoring will be estimated every year post-treatment using helicopter or fixed-wing surveys. During these surveys it is not necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to #

## Antelope Complex Gather Capture Plan and EA

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- of adults). If, during routine HMA field monitoring (on-the-ground), data describing mare to foal ratios can be collected, these data should also be shared with the NPO for possible analysis by the USGS.
3. A PZP Application Data sheet will be used by field applicators to record all pertinent data relating to identification of the mare (including photographs if mares are not freeze-marked) and date of treatment. Each applicator will submit a PZP Application Report and accompanying narrative and data sheets will be forwarded to the NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken will be maintained at the field office.
  4. A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office, and State along with the freeze-mark(s) applied by HMA and date.

# Antelope Complex Gather Capture Plan and EA

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## Appendix B

### PZP Discussion and Research

One-time application at the capture site would not affect normal development of the fetus, hormone health of the mare or behavioral responses to stallions, should the mare already be pregnant when vaccinated (Kirkpatrick 1995). The vaccine has also proven to have no apparent effect on pregnancies in progress, the health of offspring, or the behavior of treated mares (Turner, 1997). Available data from 20 years of application to wild horses contradicts the claim that PZP application in wild mares causes mares to foal out of season or late in the year (Kirkpatrick and Turner 2003). The PZP vaccine is currently being used on over 75 horse management areas for the National Park Service or the Bureau of Land Management and its use is appropriate for all free-ranging wild horse herds. The long-term goal is to reduce or eliminate the need for gathers and removals (Kirkpatrick et al. 2010).

The Food and Drug Administration (FDA), The Humane Society of the United States (HSUS), and animal care committees all carefully review protocols for PZP use, and more than 20 years of data, carried out under these set of rules, clearly show that wild horses are neither injured by this vaccine, nor do aberrational behaviors occur as a consequence of its application. Too, oversight by The Humane Society of the United States assures that the vaccine is used only to slow reproduction and may not be used for the extermination of entire herds. PZP is designed to bring about short-term infertility and is reversible, if not used beyond five consecutive years. It reduces the need for gathers and preserves the original gene pool in each herd (Kirkpatrick et al. 2010).

PZP use in wild horse herds has been studied extensively for more than two decades, with papers published in peer-reviewed scientific journals by experienced reproductive physiologists, equine scientists, wildlife biologists, geneticists, and animal behaviorists, providing a portrayal of safety, high efficacy, and absence of long-term behavioral, physical, or physiological effects from the vaccine. This data is of scientific merit, supported by field data, with statistically adequate sample sizes. Data was collected by trained, unbiased individuals, who adhere to established research methodology within his or her respective field (Kirkpatrick et al. 2010).

Ransom et al. (2010) found no differences in how PZP-treated and control mares allocated their time between feeding, resting, travel, maintenance, and social behaviors in 3 populations of wild horses, which is consistent with Powell's (1999) findings in another population. Likewise, body condition of PZP-treated and control mares did not differ between treatment groups in Ransom et al.'s (2010) study. Turner and Kirkpatrick (2002) found that PZP-treated mares had higher body condition than control mares in another population. Mortality rates were reduced below historic levels and the population experienced older age groups that had not been present previously. Treatment extended the lives and improved the health condition of older mares, by removing the stresses of pregnancy and lactation (Kirkpatrick 1995; Kirkpatrick and Turner 2002,

## Antelope Complex Gather Capture Plan and EA

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2003; Kirkpatrick et al. 1990, 1991, 1992, 1995a, 1996a, b, 1997; Liu et al. 1989; Turner and Kirkpatrick 2002, 2008; Turner et al. 1996a).

In two studies involving a total of 4 wild horse populations, both Nunez et al. (2009) and Ransom et al. (2010) found that PZP-treated mares were involved in reproductive interactions with stallions more often than control mares, which is not surprising given the evidence that PZP-treated females of other mammal species can regularly demonstrate estrus behavior while contracepted (Shumake and Wilhelm 1995, Heilmann et al. 1998, Curtis et al. 2002). Ransom et al. (2010) found that control mares were herded by stallions more frequently than PZP-treated mares, and Nunez et al. (2009) found that PZP-treated mares exhibited higher infidelity to their band stallion during the non-breeding season than control mares. Madosky et al. (in press) found this infidelity was also evident during the breeding season in the same population that Nunez et al. (2009) studied, resulting in PZP-treated mares changing bands more frequently than control mares. Long-term implications of these changes in social behavior are currently unknown. Kirkpatrick et al. (2010) conclude by stating that *“the larger question is, even if subtle alterations in behavior may occur, this is still far better than the alternative”* and that the *“other victory for horses is that every mare prevented from being removed, by virtue of contraception, is a mare that will only be delaying her reproduction rather than being eliminated permanently from the range. This preserves herd genetics, while gathers and adoption do not.”* (Kirkpatrick and Turner 2002, 2008; Turner and Kirkpatrick 2002, 2003; Willis et al. 1994.)

Bartholow (2007) concluded that the application of 2 or 3-year contraceptives to wild mares could reduce operational costs by 12-20% or up to 30% in carefully planned population management programs and contraceptive treatment would likely reduce the number of horses that must be removed in total, with attendant cost reductions in the number of adoptions and total holding costs.

Furthermore, the Humane Society for the United States (HSUS, 2010) has also completed analysis of the potential of population control with the modeling work showing that *“more aggressive changes in earlier years will yield more dramatic decreases in later years, obviating the need for removing any horses from the range in the future while still achieving AML.”* The HSUS concludes that the current management program is unsustainable and that *“by replacing the current gather-and-remove programs with gather-treat-and-release programs, the BLM would save approximately \$204 million dollars over 12 years while achieving and maintaining Appropriate Management Levels (AML) on wild horse Herd Management Areas (HMA) on public lands in the U.S.”* The HSUS strongly supports the increased use of fertility control and other population controls, advocating the expansion of these programs as alternatives to gathers and Long Term Holding.



# Antelope Complex Gather Capture Plan and EA

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## Appendix C

### Standard Operating Procedures for Gather and Handling Activities

Gathers would be conducted by utilizing contractors from the Wild Horse and Burro Gathers-Western States Contract, or BLM personnel. The following procedures for gathering and handling wild horses and burros would apply whether a contractor or BLM personnel conduct a gather. For helicopter gathers conducted by BLM personnel, gather operations will be conducted in conformance with the *Wild Horse and Burro Aviation Management Handbook* (March 2009).

Prior to any gathering operation, the BLM will provide for a pre-capture evaluation of existing conditions in the gather area(s). The evaluation will include animal conditions, prevailing temperatures, drought conditions, soil conditions, road conditions, and preparation of a topographic map with wilderness boundaries, the location of fences, other physical barriers, and acceptable gather site locations in relation to animal distribution. The evaluation will determine whether the proposed activities will necessitate the presence of a veterinarian during operations. If it is determined that capture operations necessitate the services of a veterinarian, one would be obtained before the capture would proceed. The contractor will be apprised of all conditions and will be given instructions regarding the capture and handling of animals to ensure their health and welfare is protected.

Gather sites and temporary holding sites will be located to reduce the likelihood of undue injury and stress to the animals, and to minimize potential damage to the natural and cultural resources of the area. Gather and temporary holding sites would be located on or near existing roads.

The primary capture methods used in the performance of gather operations include:

1. Helicopter Drive Trapping. This capture method involves utilizing a helicopter to herd wild horses and burros into a temporary gather site.
2. Helicopter Assisted Roping. This capture method involves utilizing a helicopter to herd wild horses or burros to ropers.
3. Bait Trapping. This capture method involves utilizing bait (water or feed) to lure wild horses and burros into a temporary gather site.

The following procedures and stipulations will be followed to ensure the welfare, safety and humane treatment of wild horses and burros in accordance with the provisions of 43 CFR § 4700.

#### A. Capture Methods Used in the Performance of Gather Contract Operations

1. The primary concern of the contractor is the safe and humane handling of all animals captured. All capture attempts shall incorporate the following: All gather sites and holding facilities locations must be approved by the Contracting Officer's

## Antelope Complex Gather Capture Plan and EA

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Representative (COR) and/or the Project Inspector (PI) prior to construction. The Contractor may also be required to change or move gather sites locations as determined by the COR/PI. All gather sites and holding facilities not located on public land must have prior written approval of the landowner.

2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.
3. All gather sites, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:
  - a. Gather sites and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All gather sites and holding facilities shall be oval or round in design.
  - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered, plywood or metal without holes.
  - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses. The location of the government furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.
  - d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses
  - e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking gates.
4. No modification of existing fences will be made without authorization from the COR/PI. The Contractor shall be responsible for restoration of any fence modification which he has made.
5. When dust conditions occur within or adjacent to the gather site or holding facility, the Contractor shall be required to wet down the ground with water.
6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, and estrays from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible,

## Antelope Complex Gather Capture Plan and EA

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injury due to fighting and trampling. Under normal conditions, the government will require that animals be restrained for the purpose of determining an animal's age or sex, or other necessary procedures. In these instances, a portable restraining chute may be necessary and will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gather requires that animals be released back into the capture area(s). In areas requiring one or more satellite gather sites, and where a centralized holding facility is utilized, the contractor may be required to provide additional holding pens to segregate animals transported from remote locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation will be at the discretion of the COR.

7. The Contractor shall provide animals held in the gather sites and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Animals held for 10 hours or more in the gather sites or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day. An animal that is held at a temporary holding facility after 5:00 p.m. and on through the night, is defined as a horse/burro feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.
8. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.
9. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if injured animals must be destroyed and provide for destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.
10. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the COR/PI for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR/PI. Animals shall not be held in gather sites and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR/PI. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original gather site. This determination will be at the discretion of the COR.

# Antelope Complex Gather Capture Plan and EA

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## **B. Capture Methods That May Be Used in the Performance of a Gather**

1. Capture attempts may be accomplished by utilizing bait (feed or water) to lure animals into a temporary gather site. If the contractor selects this method the following applies:
  - a. Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., that may be injurious to animals.
  - b. All trigger and/or trip gate devices must be approved by the COR/PI prior to capture of animals.
  - c. Gather sites shall be checked a minimum of once every 10 hours.
2. Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary gather site. If the contractor selects this method the following applies:
  - a. A minimum of two saddle-horses shall be immediately available at the gather site to accomplish roping if necessary. Roping shall be done as determined by the COR/PI. Under no circumstances shall animals be tied down for more than one hour.
  - b. The contractor shall assure that foals shall not be left behind and orphaned.
3. Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If the contractor, with the approval of the COR/PI selects this method the following applies:
  - a. Under no circumstances shall animals be tied down for more than one hour.
  - b. The contractor shall assure that foals shall not be left behind or orphaned.
  - c. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.

## **C. Use of Motorized Equipment**

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.



## Antelope Complex Gather Capture Plan and EA

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2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.
3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from gather site(s) to temporary holding facilities and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have two (2) partition gates providing three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.
4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the COR/PI.
5. Floors of tractor-trailers, stock trailers and loading chutes shall be covered and maintained with wood shavings to prevent the animals from slipping.
6. Animals to be loaded and transported in any trailer shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. The following minimum square feet per animal shall be allowed in all trailers: 11 square feet per adult horse (1.4 linear foot in an 8 foot wide trailer); 8 square feet per adult burro (1.0 linear foot in an 8 foot wide trailer); 6 square feet per horse foal (.75 linear foot in an 8 foot wide trailer); 4 square feet per burro foal (.50 linear feet in an 8 foot wide trailer).
7. The COR/PI shall consider the condition and size of the animals, weather conditions, distance to be transported, or other factors when planning for the movement of captured animals. The COR/PI shall provide for any brand and/or inspection services required for the captured animals.
8. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the Contractor will be instructed to adjust speed.

# Antelope Complex Gather Capture Plan and EA

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## D. Safety and Communications

1. The Contractor shall have the means to communicate with the COR/PI and all contractor personnel engaged in the capture of wild horses and burros utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.
  - a. The proper operation, service and maintenance of all contractor furnished property are the responsibility of the Contractor. The BLM reserves the right to remove from service any contractor personnel or contractor furnished equipment which, in the opinion of the contracting officer or COR/PI violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement personnel or equipment within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.
  - b. The Contractor shall obtain the necessary FCC licenses for the radio system
  - c. All accidents occurring during the performance of any task order shall be immediately reported to the COR/PI.
2. Should the contractor choose to utilize a helicopter, the following will apply:
  - a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.
  - b. Fueling operations shall not take place within 1,000 feet of animals.

## E. Public Participation

Opportunities for public viewing (i.e. media, interested public) of gather operations will be made available to the extent possible; however, the primary consideration will be to protect the health and welfare of the animals being gathered. The public must adhere to guidance from the onsite BLM representative. It is BLM policy that the public will not be allowed to come into direct contact with wild horses or burros being held in BLM facilities. Only authorized BLM personnel or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at anytime or for any reason during BLM operations.

# Antelope Complex Gather Capture Plan and EA

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## **F. Responsibility and Lines of Communication**

The CORs and the PIs have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

The appropriate Field Manager and the District Manager will take an active role to ensure the appropriate lines of communication are established between the gather staff, Field Office, District Office, State Office, National Program Office, and Palomino Valley Corral. All publicity, formal public contact and inquiries will be handled through the appropriate Field Manager.

## **G. Resource Protection**

Gather sites and holding facilities would be located in previously disturbed areas whenever possible to minimize potential damage to the natural and cultural resources.

Gather sites and temporary holding facilities would not be constructed on wetlands or riparian zones.

Prior to implementation of gather operations, gather sites and temporary holding facilities would be evaluated to determine their potential for containing cultural resources. All gather facilities (including gather sites, gather runways, blinds, holding facilities, camp locations, parking areas, helicopter pads, staging areas, etc.) that would be located partially or totally in new locations (i.e. not at previously used gather locations) or in previously undisturbed areas would be inventoried by a BLM archaeologist or district archaeological technician before initiation of the gather. A buffer of at least 50 meters would be maintained between gather facilities and any identified cultural resources.

Gather sites and holding facilities would not be placed in known areas of Native American concern.

The contractor would not disturb, alter, injure or destroy any scientifically important paleontological remains; any historical or archaeological site, structure, building, grave, object or artifact; or any location having Native American traditional or spiritual significance within the project area or surrounding lands. The contractor would be responsible for ensuring that its employees, subcontractors or any others associated with the project do not collect artifacts and fossils, or damage or vandalize archaeological, historical or paleontological sites or the artifacts within them. Should damage to cultural or paleontological resources occur during the period of gather due to the unauthorized, inadvertent or negligent actions of the contractor or any other project personnel, the contractor would be responsible for costs of rehabilitation or mitigation. Individuals involved in illegal activities may be subject to penalties under the Archaeological Resources Protection Act (16 U.S.C 470ii), the Federal Land Management Policy Act (43

## Antelope Complex Gather Capture Plan and EA

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U.S.C 1701), the Native American Graves and Repatriation Act (16 U.S.C. 1170) and other applicable statutes.

# Antelope Complex Gather Capture Plan and EA

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## Appendix D

### Bluebell WSA Operating Requirements for the Shafter Well Gather Site

- A wilderness specialist or a COR who is knowledgeable on the non-impairment standard will be present during set-up and removal of the gather site. The COR will inform the contractor and all personnel on-site of the location and rules for uses in Wilderness Study Areas.
- All motorized vehicles must stay on existing roads. Vehicles that are parked in the area must be parked in already disturbed areas.
- All gather sites and blinds will be erected without causing surface disturbance.
- Any helicopter landings will be in previously disturbed areas at the site. For example, there is a gravelly area that is devoid of vegetation near the well pump that could be used for landing a helicopter.
- All trash and waste will be disposed of properly and not buried or burned on-site. Any new or additional disturbance within the WSA will be repaired by BLM as soon as possible. This includes reseeding if necessary.



# Antelope Complex Gather Capture Plan and EA

## Appendix E

### Appropriate Management Level by Allotment for the Antelope Complex

Appropriate Management Level for the Antelope HMA	
Allotment	AML by Allotment
Becky Creek <sup>1</sup>	5-8
Becky Springs <sup>2</sup>	21-35
Cherry Creek <sup>3</sup>	1-4
Chin Creek <sup>4</sup>	91-152
Deep Creek <sup>5</sup>	18-30
Goshute Mountain <sup>6</sup>	0-incidental
Lovell Peak <sup>7</sup>	5-8
McDermid Creek <sup>8</sup>	incidental
North Steptoe <sup>9</sup>	4-6
North Steptoe Trail	0
Sampson Creek <sup>10</sup>	15-25
Schellbourne <sup>11</sup>	4-6
Tippett <sup>12</sup>	20-34
Tippett Pass <sup>13</sup>	10-16
Total	194-324

<sup>1</sup> AML established through the Becky Creek Final Multiple Use Decision in April 1991.

<sup>2</sup> AML established in An "Agreement for Livestock Grazing Management and Establishment of Wild Horse Appropriate Management Level for the Becky Springs Allotment" in September 2001.

<sup>3</sup> AML established through the Cherry Creek Allotment Final Multiple Use Decision in July 2001.

<sup>4</sup> AML established through the Chin Creek Allotment Final Multiple Use Decision in July 1990.

<sup>5</sup> AML established through the Deep Creek Allotment Final Multiple Use Decision in October 2001.

<sup>6</sup> AML established through the Badlands Final Multiple Use Decision in August 1998.

<sup>7</sup> AML established through the Lovell Peak Final Multiple Use Decision in October 1994.

<sup>8</sup> AML AML established through the Maverick Complex Allotment Final Multiple Use Decision in June 2001.

<sup>9</sup> AML established through the North Steptoe Final Multiple Use Decision in December 1992.

<sup>10</sup> AML established through the Sampson Creek Allotment Final Multiple Use Decision in July 1990.

<sup>11</sup> AML established through the Schellbourne Allotment Final Multiple Use Decision in March 2001.

<sup>12</sup> AML established through the Tippett Allotment Final Multiple Use Decision in July 1990.

<sup>13</sup> AML established in an Agreement for Changes in Livestock Grazing Use and Establishment of Wild Horse Appropriate Management Level for the Tippett Pass Allotment" in October 2001 As per current Washington Office direction, AML is expressed as a single number but the population is reduced below AML during a gather. The population is expected to be at or above AML at the time of the next gather (in approximately four years).

## Antelope Complex Gather Capture Plan and EA

<b>Appropriate Management Level for the Antelope Valley HMA</b>	
Allotment	AML by Allotment
Antelope Valley <sup>5</sup>	5-8
Badlands <sup>4</sup>	Incidental
Boone Springs <sup>1</sup>	14-23
Currie <sup>3</sup>	24-40
Ferber Flat <sup>1</sup>	Incidental
Spruce <sup>2</sup>	67-112
Sugarloaf <sup>1</sup>	Incidental
UT/NV South <sup>1</sup>	4-7
Valley Mountain <sup>2</sup>	43-69
West White Horse <sup>1</sup>	Incidental
White Horse <sup>1</sup>	Incidental
Total	155- 259 <sup>6</sup>
<sup>1</sup> AML established through the Sheep Allotment Complex Final Multiple Use Decision in October 2001. <sup>2</sup> AML established through the Spruce Final Multiple Use Decision in 1998 and modified in 2002 by Stipulated Agreement. <sup>3</sup> AML established through the Maverick Complex Allotment Final Multiple Use Decision in June 2001 <sup>4</sup> AML established through the Badlands Final Multiple Use Decision in August 1998. <sup>5</sup> AML established through the Antelope Valley Final Multiple Use Decision in December 1994. <sup>6</sup> Difference due to rounding. As per current Washington Office direction, AML is expressed as a single number but the population is reduced below AML during a gather. The population is expected to be at or above AML at the time of the next gather (in approximately four years).	

<b>Appropriate Management Level for the Goshute HMA</b>	
Allotment	AML by Allotment
East Big Springs <sup>2</sup>	34-56
Lead Hills <sup>1</sup>	incidental
Leppy Hills <sup>1</sup>	5-8
Spruce <sup>3</sup>	29-50
UT/NV North <sup>1</sup>	5-9
White Horse <sup>1</sup>	incidental
Total	74-123 <sup>4</sup>
<sup>1</sup> AML established through the Sheep Allotment Complex Final Multiple Use Decision in October 2001. <sup>2</sup> AML established through the Big Springs Final Multiple Use Decision in September 2002. <sup>3</sup> AML established through the Spruce Final Multiple Use Decision in 1998 and modified in 2002 by Stipulated Agreement. <sup>4</sup> Difference due to rounding. As per current Washington Office direction, AML is expressed as a single number but the population is reduced below AML during a gather. The population is expected to be at or above AML at the time of the next gather (in approximately four years).	

## Antelope Complex Gather Capture Plan and EA

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Appropriate Management Level for the Spruce-Pequop HMA	
Allotment	AML by Allotment
Spruce <sup>1</sup>	49-82
Total	49-82
<sup>1</sup> AML established through the Spruce Final Multiple Use Decision in 1998. As per current Washington Office direction, AML is expressed as a single number but the population is reduced below AML during a gather. The population is expected to be at or above AML at the time of the next gather (in approximately four years).	

# Antelope Complex Gather Capture Plan and EA

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## Appendix F

### Summary of Allotment and Related Decisions for the Antelope Complex

#### A. Ely District Allotments

##### **Becky Creek Allotment**

The Becky Creek Allotment FMUD was issued April 19, 1991. This decision established the wild horse AML at 8 wild horses (96 AUMs) for the Becky Creek Allotment portion of the Antelope HMA. Permitted use for sheep was adjusted from 1,033 AUMs to the current level of 671 AUMs (active) with no suspended AUMs. A Final Decision was issued on December 29, 2009 for a change in kind of livestock from just sheep to sheep and goats. The Final Decision divided the 671 AUMS (active) between the two types of livestock: 335 AUMs for goats and 336 AUMs for sheep.

##### **Becky Springs Allotment**

An “Agreement for Livestock Grazing Management and Establishment of Wild Horse Appropriate Management Level for the Becky Springs Allotment” was prepared during September 2001. The agreement was signed by permittees during October 2001. The agreement does not make changes to season of use or permitted use for cattle or sheep. The current permitted use for the Becky Springs Allotment is 3,842 AUMs (active): 2,912 AUMs are for sheep and 930 AUMs are for cattle with no suspended AUMs. This agreement was prepared in consultation with the permittees and is an initial step toward establishing a wild horse AML. This agreement established a wild horse AML of 35 wild horses (420 AUMs) for the Becky Springs Allotment portion of the Antelope HMA.

##### **Cherry Creek Allotment**

The Cherry Creek Allotment FMUD was issued July 20, 2001. This decision established the AML at 4 wild horses (46 AUMs) for the Cherry Creek Allotment portion of the Antelope HMA. A Final Decision was issued on March 2, 2009 that set AUMs for cattle use at the current level: a total of 9,089 AUMs with 6,197 AUMs for active use and 2,892 AUMs suspended.

##### **Chin Creek Allotment**

The Chin Creek Allotment Final Multiple-Use Decision (FMUD) was issued July 16, 1990. This decision established the wild horse appropriate management level (AML) at 152 wild horses (1,824 AUMs) for the Chin Creek Allotment portion of the Antelope HMA. Permitted use for cattle and sheep was adjusted from 13,245 AUMs to the current level of 7,183 AUMs (active) and 6,062 AUMs (suspended). The total 7,183 AUMs (active) are divided as follows: 3,564 AUMs for cattle use and 3,619 AUMs for sheep use. The total 6,062 AUMs (suspended) are divided by livestock type and type of suspension: 2,206 AUMs for cattle (130 AUMs suspended, 2,076 AUMs nonuse for conservation and protection) and 3,856 AUMs for sheep (189 AUMs voluntary nonuse, 3,667 AUMs nonuse for conservation and protection).

# Antelope Complex Gather Capture Plan and EA

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## **Deep Creek Allotment**

The FMUD for the Deep Creek Allotment Portion of the Antelope HMA was issued October 25, 2001. This decision established the AML at 30 wild horses (360 AUMs) for the Deep Creek Allotment portion of the Antelope HMA. The permitted use on the allotment was not adjusted and remains at 2,934 AUMs (active) with no suspended AUMs.

## **Lovell Peak Allotment**

The Lovell Peak Allotment FMUD was issued October 7, 1994. This decision established the wild horse AML at 8 wild horses (93 AUMs) for the Lovell Peak Allotment portion of the Antelope HMA. Permitted use remained unchanged by the FMUD at a total 162 AUMs for sheep use, with 105 AUMs (active) and 57 AUMs (suspended). A Final Decision was issued on December 29, 2009 for a change in kind of livestock from just sheep to sheep and goats. The Final Decision divided the total 162 AUMs between the two types of livestock: 53 AUMs (active) for sheep and 52 AUMs (active) with 57 AUMs (suspended) for goats.

## **North Steptoe Allotment**

The North Steptoe Allotment FMUD was issued December 24, 1992. This decision established the wild horse AML at 6 wild horses (77 AUMs) for the North Steptoe Allotment portion of the Antelope HMA. Total permitted use for sheep is 1459 AUMs, with 700 AUMs (active) and 589 AUMs (suspended).

## **Sampson Creek Allotment**

The Sampson Creek Allotment FMUD was issued July 18, 1990. This decision established the wild horse AML at 25 wild horses (300 AUMs) for the Sampson Creek Allotment portion of the Antelope HMA. Total permitted use for sheep is 1,592 AUMs, with 1,327 AUMs (active) and 265 AUMs (suspended).

## **Schellbourne Allotment**

The Schellbourne Allotment FMUD was issued March 28, 2001. This decision established the wild horse AML at 6 wild horses (72 AUMs) for the Schellbourne Allotment portion of the Antelope HMA. Total permitted use for cattle remained at 1,452 AUMs, with 685 AUMs (active) and 767 AUMs (suspended).

## **Tippett Allotment**

The Tippett Allotment FMUD was issued July 17, 1990. This decision established the wild horse AML at 34 wild horses for the Tippett Allotment portion of the Antelope HMA. Total permitted use for cattle and sheep is 13,615 AUMs, with 8,560 AUMs (active) and 5,055 AUMs (suspended). The active and suspended AUMs are divided between cattle and sheep as follows: 4,068 AUMs (active) and 815 AUMs (suspended) for cattle use and 4,492 AUMs (active) and 4,240 AUMs (suspended) for sheep use.

## **Tippett Pass Allotment**

An "Agreement for Changes in Livestock Grazing Use and Establishment of Wild Horse Appropriate Management Level for the Tippett Pass Allotment" was signed on October



## Antelope Complex Gather Capture Plan and EA

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11, 2001. This agreement established a wild horse AML of 16 wild horses (192 AUMs) for the Tippet Pass Allotment portion of the Antelope HMA. Prior to the agreement, a total of 8,177 AUMs were permitted for livestock on the allotment; however none of the AUMs had ever been specifically allocated to sheep or cattle. Following the agreement, active use was adjusted from the full 8,177 AUMs to 3,914 AUMs (2,646 AUMs allocated to cattle and 1,268 AUMs to sheep). The remaining 4,263 AUMs (3,217 AUMs allocated to cattle and 1,046 AUMs to sheep) were suspended and placed in voluntary nonuse for conservation purposes.

### **B. Elko District Allotments**

#### **Badlands and Goshute Mountain Allotments**

The Goshute Mountain Allotment is located within the boundary of the Ely District and the Antelope HMA; the allotment is adjacent to the Badlands Allotment and the Antelope Valley HMAs, which are in the Elko District. In 1983 an administrative agreement was signed between the Ely and Elko District Offices; grazing administration responsibility was transferred to the Elko District Office for the Goshute Mountain Allotment. Grazing administration includes the responsibility of grazing supervision, conducting range studies, project development and the determination of grazing capacity.

The FMUD for the Badlands and Goshute Mountain Allotments was issued on June 18, 1998. The FMUD established AML at 5 AUMs in the Badlands Allotment in the Antelope Valley HMA and 0 AUMs in the Goshute Mountain Allotment in the Antelope HMA. The FMUD reduced the permitted AUMs for livestock on the Badlands Allotment from 2,647 AUMs to 1,018 AUMs (active) with no suspended AUMs. The FMUD maintained the permitted AUMs for livestock on the Goshute Allotment at 465 AUMs (active) with no suspended AUMs.

#### **Antelope Valley Allotment**

On July 16, 1990, the Schell Resource Area issued a FMUD regarding management within the Chin Creek Allotment. The Antelope Valley Allotment adjoins the Chin Creek Allotment within the Ely District. Because of this, the FMUD incorporated the Antelope Valley Allotment into a grazing system with the North Pasture and South Pasture of the Chin Creek Allotment. The Chin Creek FMUD was appealed and resolution of the appeals culminated in a "Stipulation to Withdraw Appeals" in September 1991 which outlined an interim 3 pasture rotation grazing system that incorporated the Antelope Valley Allotment. The present grazing system is outlined in the "Stipulation to Withdraw Appeals" settling an appeal which spells out the grazing system and other terms and conditions for use in the Antelope Valley Allotment. The Antelope Valley Allotment is in an interim (as per the "Stipulation to Withdraw Appeals") three pasture deferred-rotation grazing system with the North and South Pastures which are administered by the Ely District.

The total permitted use in the Antelope Valley Allotment is 5,376 AUMs with 2,555 AUMs placed into non-use for conservation and protection of the federal range and 130 suspended AUMs. The allotment is used as one unit and is normally grazed by cattle

## Antelope Complex Gather Capture Plan and EA

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from November 1 to May 31 as outlined in the Antelope Valley Final Multiple Use Decision (FMUD) issued in 1994 and Badlands and Goshute Mountain FMUD issued in 1998.

### **Big Springs and Sheep Allotment Complex Allotments**

Elko Field Office issued the "Final Multiple Use Decisions for the Big Springs Allotment and the Sheep Allotment Complex in 2002. Among other actions, this decision implemented following actions in relation to livestock and wild horse management.

The Big Spring Decision split the Big Springs Allotment into the East and West Big Springs Allotments. It reduced permitted livestock use in the East Big Springs Allotment from 16,598 AUMs to 12,175 AUMs.

The Sheep Allotment Complex Evaluation encompassed 9 grazing allotments (Boone Springs, Ferber Flat, UT/NV North, UT/NV South, Lead Hills, Leppy Hills, Sugarloaf, West White Horse, and White Horse Allotments). The allotments were evaluated through an ecosystem approach. The Sheep Allotment Complex Decision split the UT/NV #1 Allotment into the UT/NV North and UT/NV South Allotments. In the Sheep Allotment Complex Decision livestock use was reduced in the Sheep Allotment Complex from 39,915 AUMs to 26,652 AUMs.

Western Watersheds Project (WWP) appealed these decisions but withdrew their appeals after their Petition for Stay was not granted. WWP then combined the Big Springs and Sheep Complex Decisions with one other similar decision (Owyhee Allotment) into a single complaint filed in U.S. District court. On August 18, 2004 the Honorable Judge Howard D. McKibben issued a minute order in which he generally upheld the existing decisions while directing BLM to prepare an Environmental Impact Statement to analyze impacts of grazing, considering springs, seeps and riparian areas, upland habitat and land use plans to the extent they applied to certain sensitive species, which in the case of Big Springs included only sage grouse.

In July 2005 the BLM started preparation of the EIS as directed by the court. WWP moves several times to have the court issue injunctions to remove grazing from the affected allotments until such time as the EIS is completed. All such requests are denied. WWP appeals the denial of one such decision issued on 25 February 2005 to the Ninth Circuit Court of Appeals. The Ninth Circuit referred the case to mediation. During this process, WWP and BLM reached an agreement under which WWP will withdraw their appeal if BLM and the livestock permittees sign agreements to constrain livestock use for the 2005-2006 fee year. BLM subsequently completed agreements with both permittees in the Big Springs Allotments; the agreement affecting East Big Springs Allotment reduced permitted use to 10,500 AUMs for the grazing fee year. The initial agreement is signed by both the BLM and the permittee on 18 July 2005, with a revised agreement signed on 27 July 2005. No agreements were required for the Sheep Allotment Complex.

On October 30, 2006, the BLM completed the EIS and issued the "Final Grazing Management Decision and Record of Decision for the Sheep Complex, Big Springs and

## Antelope Complex Gather Capture Plan and EA

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Owyhee Grazing Allotments.” This decision left permitted use for the East Big Springs Allotment at 12,175 AUMs, but placed 2,025 of those AUMs in temporary suspension until certain range improvement projects and short term management objectives are met. The remaining 10,150 AUMs are available for livestock use within the constraints of the grazing system and carrying capacity calculations prescribed in the decision.

The decision permitted use in the Sheep Allotment Complex at 26,652 AUMs, but placed 9,178 of those AUMs in temporary suspension until certain range improvement projects and short term management objectives are met. The remaining 17,573 AUMs are available for livestock use within the constraints of the grazing system and carrying capacity calculations prescribed in the decision. The Sheep Allotment Complex allotments are normally grazed by sheep from November 1 to April 30 as outlined in the Sheep Allotment Complex FMUD and “Final Grazing Management Decision and Record of Decision for the Sheep Complex, Big Springs and Owyhee Grazing Allotments.” The permittees haul water or use snow to water livestock in the allotments.

In November 2003 the Elko F.O. issued drought closures for portions of the Leppy Hills, Lead Hills, White Horse, West White Horse, Sugarloaf, Ferber Flat and UT/NV South Allotments. The drought closures temporarily suspended [due to drought] 42% of the permitted use in the aforementioned allotments. Portions of the closures in the Sugarloaf, Ferber Flat, White Horse, Lead Hills, and Leppy Hills Allotments remain in place.

Several decision points from the 2002 decisions, including the horse management decision, remain in place.

### **Chase Springs Allotment**

The authorized season of use in the Chase Springs Allotment is from April 1 to November 30 annually. Total permitted use is 2,586 AUMs for livestock. The Spruce-Pequop HMA extends just into the southern border of this allotment, but no wild horse use in this portion of the Spruce-Pequop HMA has been documented since the mid 1980's.

### **Currie and McDermid Creek Allotments**

The McDermid Creek Allotment is located at the top of the McDermid Canyon and is generally inaccessible except by going through the Currie Allotment. Because of this, the McDermid Creek Allotment is treated as a pasture of the Currie Allotment and is administered as such.

The Elko District Office issued a FMUD on June 6, 2001 for the Maverick/Medicine Complex, which included the Currie Allotment. The FMUD established 5,504 AUMs for livestock use in the entire Currie Allotment. The AML was established in the FMUD at 480 AUMs for the entire Currie Allotment. The season of use for the entire Currie Allotment is 3/1 to 2/28 annually.

The Currie Allotment and the Antelope Valley HMA are divided in two by the right-of-way fences for U.S. Highway 93. The Antelope Complex Gather EA is only analyzing

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## Antelope Complex Gather Capture Plan and EA

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gathering the areas of the Currie Allotment on the east side of U.S. Highway 93 within the Antelope Valley HMA. The following information about the Currie Allotment clarifies the portion that is applicable to the Antelope Complex Gather EA. Only three pastures of the Currie Allotment are to be gathered at this time: the Currie Hills, Currie Flats and Mustang Well Pastures. Of the total 5,504 AUMs for livestock use established in the FMUD, 1,055 AUMs are in these three pastures and are divided as follows: Currie Hills- 101 AUMs; Currie Flats- 454 AUMs; and Mustang Well- 500 AUMs. Of the total 480 AUMs for AML established in the FMUD, 39 AUMs of the AML are allotted to the Mustang Well Pasture. The AML for the Currie Hills and Currie Flats Pastures is 0 AUMs because they are to be managed as horse free per the FMUD. The season of use in the portion of the Currie Allotment to be gathered is 11/1 to 2/28 annually.

### **Valley Mountain and Spruce Allotments**

The Elko District Office issued a FMUD for the old Spruce Allotment on January 30, 1998. The FMUD divided the old Spruce Allotment into two new allotments: Valley Mountain and Spruce (from here on reference to 'Spruce Allotment' means the new Spruce). The FMUD established 5,572 AUMs for livestock use (4,532 AUMs active and 1,040 AUMs voluntary nonuse) in the entire Valley Mountain Allotment and a total of 11,769 AUMs for livestock use (10,965 AUMs active and 804 AUMs voluntary nonuse) in the entire Spruce Allotment. The FMUD was appealed by one of the permittees regarding the Spruce Allotment. A Stipulated Agreement was signed December 23, 2002 as settlement of the appeal. The Stipulated Agreement modified the FMUD and established the total permitted number of AUMs for the entire Spruce Allotment at 13,423 AUMs for livestock use (10,965 AUMs active and 2,458 AUMs suspended). The season of use for the entire Valley Mountain Allotment is 11/1 to 5/15 annually. The season of use for the entire Spruce Allotment is 3/1 to 2/28 annually.

The Valley Mountain Allotment is divided in two by U.S. Highway 93. The Antelope Gather EA is only analyzing gathering the portion of the Valley Mountain Allotment on the east side of the highway. The portion of the Valley Mountain Allotment that will be gathered is made up of two use areas: B-1 and B-2. Of the total 4,532 AUMs for livestock grazing in the Valley Mountain Allotment, 1,641 AUMs are allocated to B-1 and B-2. The season of use in the Valley Mountain Allotment for the use areas to be gathered is 11/16 to 3/31.

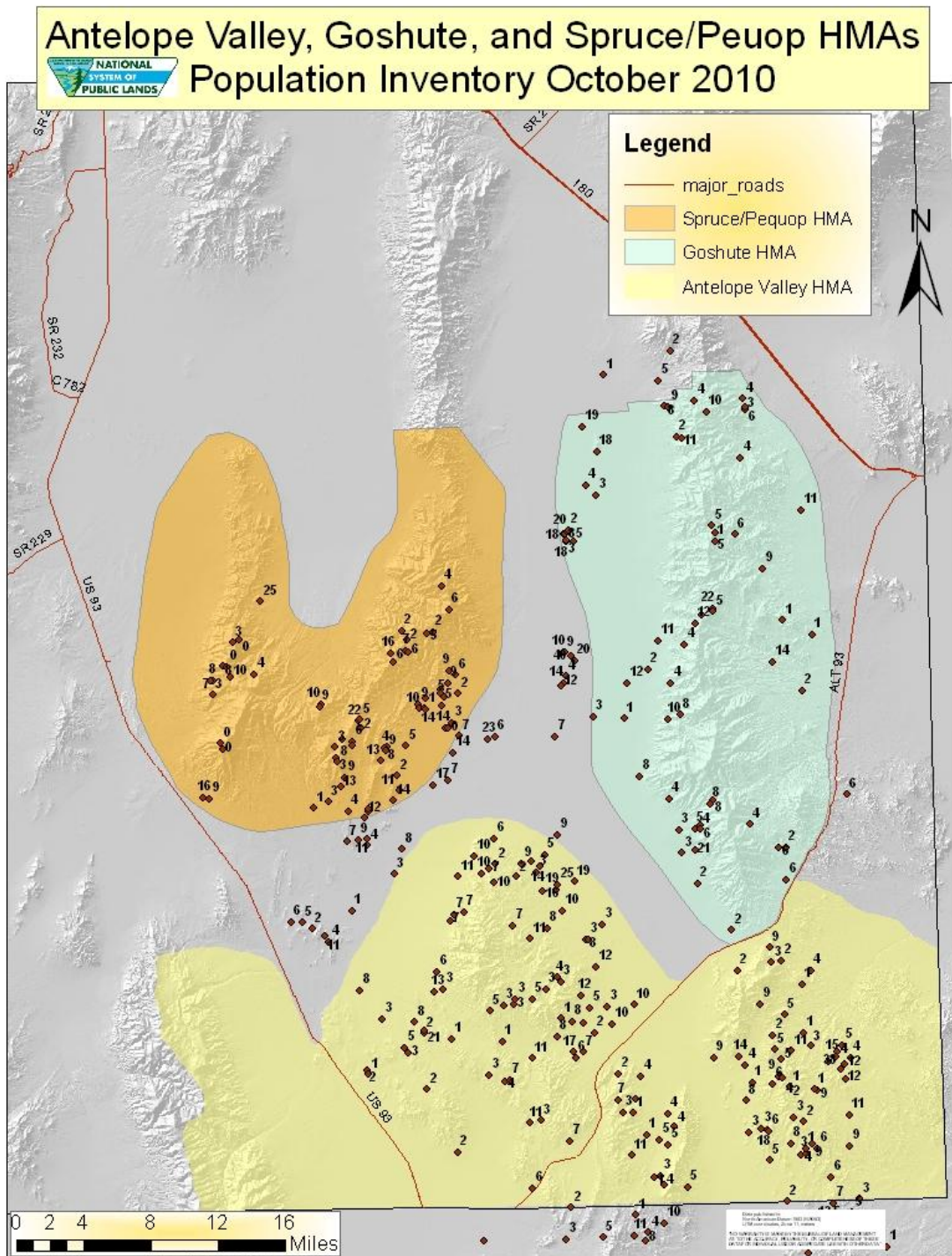
The FMUD established a combined total AML in the Antelope Valley HMA for the Valley Mountain and Spruce Allotments of 181 horses (2,172 AUMs). The exact AML is not specified in the FMUD for each allotment. Based on the acres of the Antelope Valley HMA in each allotment, the AML for Spruce is 112 horses (1,344 AUMs) and the AML for Valley Mountain is 69 horses (828 AUMs).



# Antelope Complex Gather Capture Plan and EA

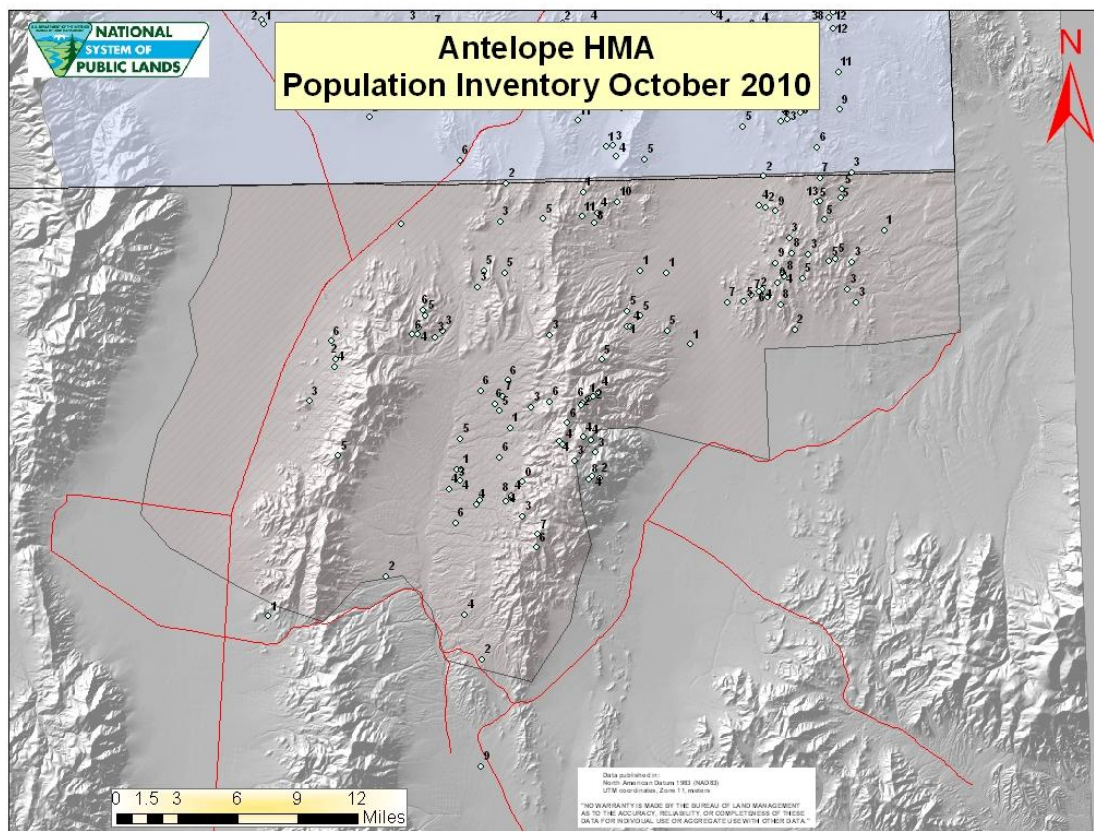
## Appendix G

### 2010 Antelope Complex Inventory Maps





# Antelope Complex Gather Capture Plan and EA



# Antelope Complex Gather Capture Plan and EA

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## Appendix H

### WinEquus Population Modeling

To complete the population modeling for the Antelope Complex version 3.2 of the WinEquus program, created April 2, 2002, was utilized.

#### Objectives of Population Modeling

Review of the data output for each of the simulations provided many useful comparisons of the possible outcomes for each alternative. Some of the questions that need to be answered through the modeling include:

- Do any of the Alternatives “crash” the population?
- What are the different growth rates and numbers removed?
- What effect does fertility control have on population growth rate?
- What effects do the different alternatives have on the average population size?

#### Population Data, Criteria, and Parameters utilized for Population

Modeling all simulations used the survival probabilities, foaling rates, and sex ratio at birth that was supplied with the WinEquus population model for the Garfield HMA 1997.

Sex ratio at Birth:  
47% Females  
53% Males

The following percent effectiveness of fertility control was utilized in the population modeling for Alternative A:

Yr 1 = 92%; Yr 2 = 84%; Yr = 60%

The following table displays the contraception parameters utilized in the population model for Alternative A:

#### Contraception Criteria (Alternative A)

Age	Fertility Treatment
Foal	0%
1	0%
2	100%
3	100%
4	100%
5	100%
6	100%
7	100%
8	100%

## Antelope Complex Gather Capture Plan and EA

Age	Fertility Treatment
9	100%
10-14	100%
15-19	100%
20+	100%

### Population Modeling Criteria

The following summarizes the population modeling criteria that are common to the Proposed Action, and all alternatives:

- Starting Year: 2011
- Initial gather year: 2011
- Gather interval: minimum interval of three years.
- Gather for fertility treatment regardless of population size: No
- Continue to gather after reduction to treat females: Yes
- Sex ratio at birth: 53% males
- Percent of the population that can be gathered: 85%
- Minimum age for long term holding facility horses: Not Applicable
- Foals are not included in the AML
- Simulations were run for 10 years with 100 trials each

The following table displays the population modeling parameters utilized in the model:

Population Parameters Modeling Parameter	Alternative A Gather and Apply Fertility Control and Adjust sex ratio	Alternative B Gather and Adjust sex ratio	Alternative C Removal Only	Alternative E No Action (No Removal & No Fertility Control)
Management by removal, and fertility control	Yes	No	No	N/A
Management by removal, 60:40 adjustment in sex ratio, and fertility control	No	Yes	No	N/A
Management by removal only	No	No	Yes	N/A

## Antelope Complex Gather Capture Plan and EA

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Population Parameters <b>Parameter</b>	Modeling <b>Modeling</b>	<b>Alternative A Gather and Apply Fertility Control and Adjust sex ratio</b>	<b>Alternative B Gather and Adjust sex ratio</b>	<b>Alternative C Removal Only</b>	<b>Alternative E No Action (No Removal &amp; No Fertility Control)</b>
Threshold Population Size for Gathers (High end AML)		788	788	788	N/A
Target Population Size Following Gathers (Mid Point)		788	788	788	N/A
Gather for fertility control regardless of population size		No	No	No	N/A
Gathers continue after removals to treat additional females		Yes	Yes	No	N/A
Effectiveness of Fertility Control: year 1		92%	N/A	N/A	N/A
Effectiveness of Fertility Control: year 2		84%	N/A	N/A	N/A
Effectiveness of Fertility Control: year 3 (gather and retreat)		60%	N/A	N/A	N/A

### Results of WinEquus Population Modeling

Population modeling was completed for the proposed action and the alternatives. One hundred trials were run, simulating population growth and herd demographics to determine the projected herd structure for the next four years, or prior to the next gather. The computer program used simulates the population dynamics of wild horses. It was written by Dr. Stephen H. Jenkins, Department of Biology, University of Nevada, Reno, under a contract from the National Wild Horse and Burro Program of the Bureau of Land Management and is designed for use in comparing various management strategies for wild horses.

To date, one herd has been studied using the 2-year PZP vaccine. The Clan Alpine study, in Nevada, was started in January 2000 with the treatment of 96 mares. The test resulted in fertility rates in treated mares of 6% year one and 18% year two.

### Interpretation of the Model

The estimated population of 2,705 wild horses in the Antelope Complex was based on the October inventory. This population estimated was used in the population modeling. Year one is the baseline starting point for the model and reflects wild horse numbers immediately prior to the gather action and also reflects a slightly skewed sex ratio favoring females. A sex ratio of 53:47 was entered into the model for the post-gather a

## Antelope Complex Gather Capture Plan and EA

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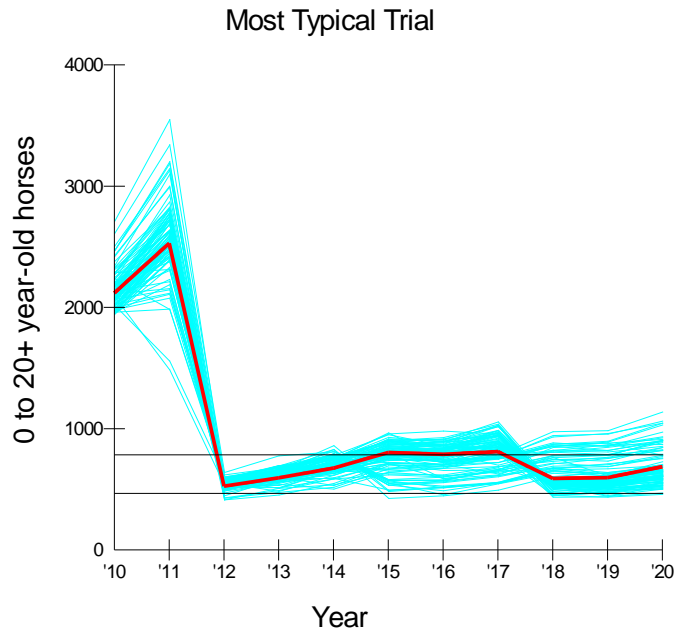
population. In this population modeling, year one would be 2011. Year two would be exactly one year in time from the original action, and so forth for years three, four, and five, etc. Consequently, at year eleven in the model, exactly ten years in time would have passed. In this model, year eleven is 2021. This is reflected in the Population Size Modeling Table by “Population sizes in ten years” and in the Growth Rate Modeling Table by “Average growth rate in 10 years.” Growth rate is averaged over ten years in time, while the population is predicted over the same ten years to the end point of year eleven. The Full Modeling Summaries contain tables and graphs directly from the modeling program.

The parameters for the population modeling were:

1. gather when population exceeds 788 in the Antelope Complex
2. foals are not included in AML
3. percent to gather 85
4. three years between gathers
5. number of trials 100
6. number of years 10
7. initial calendar year 2011
8. initial population size for all HMAs = 2,705
9. population size for the combined total of all HMAs after gather = 427
10. implement selective removal criteria
11. fertility control Yes for Proposed Action (Alternative A) and Alternative D, and No for Alternatives B, C and E

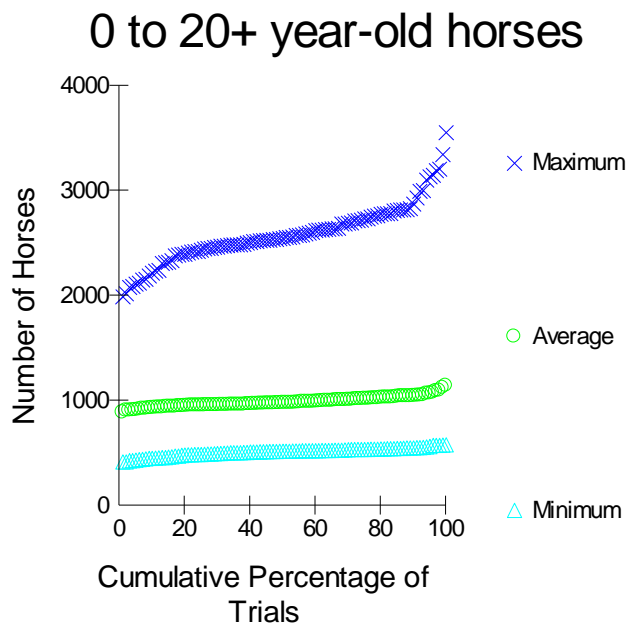


## Antelope Complex NV Removal and apply fertility control and adjust sex ratios 60% Studs and 40% Mares Proposed Action



The two horizontal lines above reflect the low AML (427) and the high AML (788).

### Population Size



# Antelope Complex Gather Capture Plan and EA

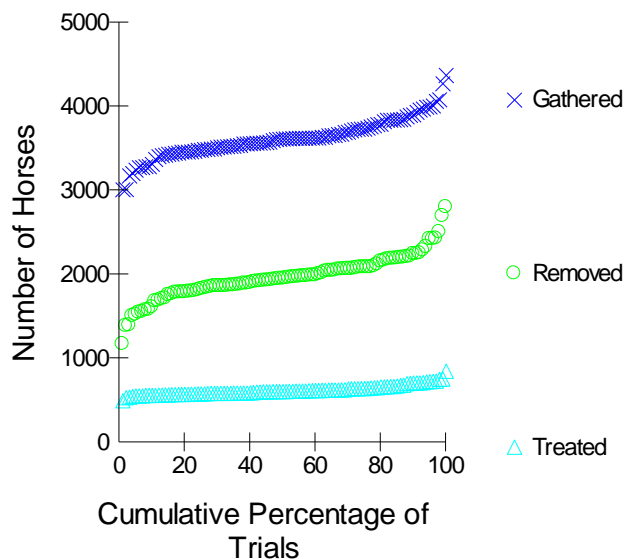
	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	416	887	1991
10th Percentile	452	931	2226
25th Percentile	490	954	2441
Median Trial	518	977	2552
75th Percentile	536	1017	2734
90th Percentile	552	1044	2903
Highest Trial	580	1140	3554

\* 0 to 20+ year-old horses

In 11 yrs and 100 trials, the lowest number of 0 to 20+ yr old horses ever obtained was 416 and the highest was 3554. In half the trials the minimum population size in 11 yrs was less than 518 and the maximum was less than 2552. The average population size in 11 yrs ranged from 887 to 1140.

## Gathers

### 0 to 20+ year-old horses



	Totals in 11 Years*		
	Gathered	Removed	Treated
Lowest Trial	3012	1172	497
10th Percentile	3343	1645	562
25th Percentile	3486	1828	579
Median Trial	3616	1951	607
75th Percentile	3740	2086	644
90th Percentile	3917	2243	710
Highest Trial	4372	2801	848

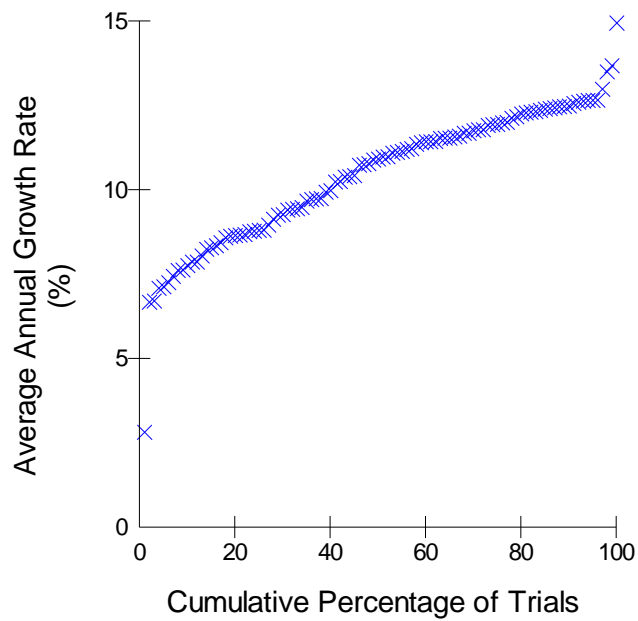
\* 0 to 20+ year-old horses

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## Antelope Complex Gather Capture Plan and EA

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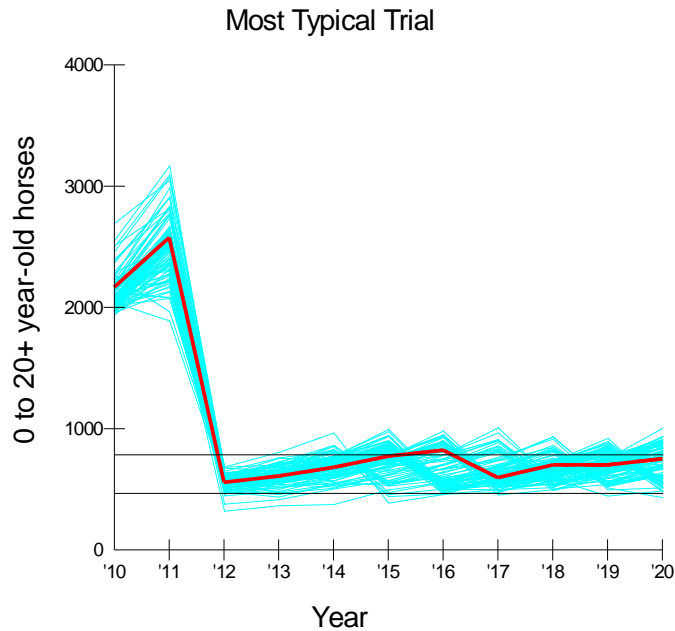
### Growth Rate



#### Average Growth Rate in 10 Years

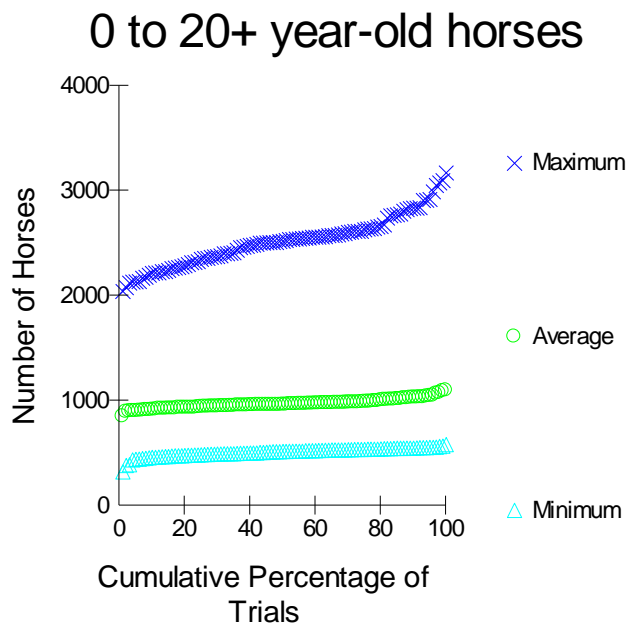
Lowest Trial	2.8
10th Percentile	7.8
25th Percentile	8.8
Median Trial	11.0
75th Percentile	12.0
90th Percentile	12.5
Highest Trial	15.0

## Antelope Complex NV Removal and adjust sex ratios 60% Studs and 40% Mares Alternative B



The two horizontal lines above reflect the low AML (427) and the high AML (788).

### Population Size



# Antelope Complex Gather Capture Plan and EA

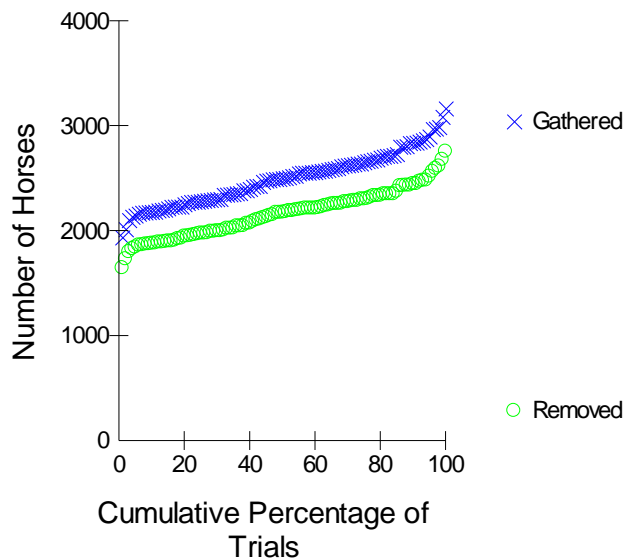
	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	323	849	2042
10th Percentile	460	914	2216
25th Percentile	486	941	2352
Median Trial	516	961	2524
75th Percentile	538	988	2633
90th Percentile	550	1028	2836
Highest Trial	582	1098	3170

\* 0 to 20+ year-old horses

In 11 yrs and 100 trials, the lowest number of 0 to 20+ yr old horses ever obtained was 323 and the highest was 3170. In half the trials the minimum population size in 11 yrs was less than 516 and the maximum was less than 2554. The average population size in 11 yrs ranged from 849 to 1098.

## Gathers

### 0 to 20+ year-old horses



	Totals in 11 Years*	
	Gathered	Removed
Lowest Trial	1938	1645
10th Percentile	2182	1881
25th Percentile	2284	1975
Median Trial	2501	2178
75th Percentile	2659	2304
90th Percentile	2839	2448
Highest Trial	3165	2755

\* 0 to 20+ year-old horses

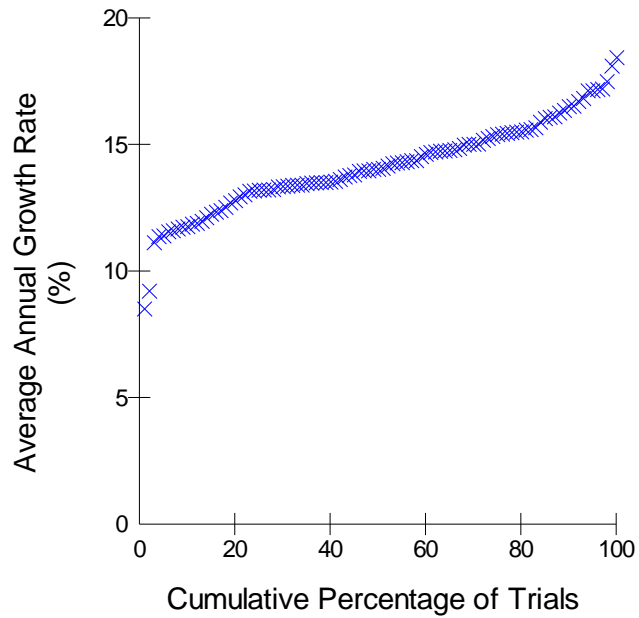


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## Antelope Complex Gather Capture Plan and EA

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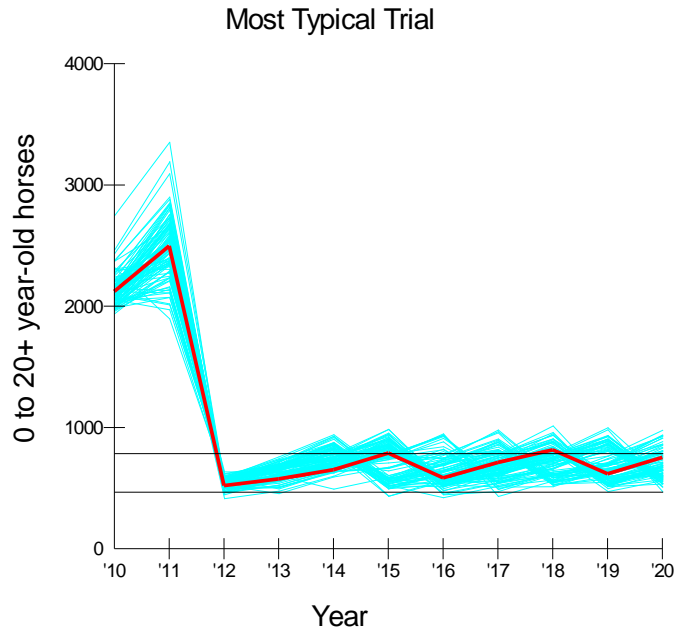
### Growth Rate



#### Average Growth Rate in 10 Years

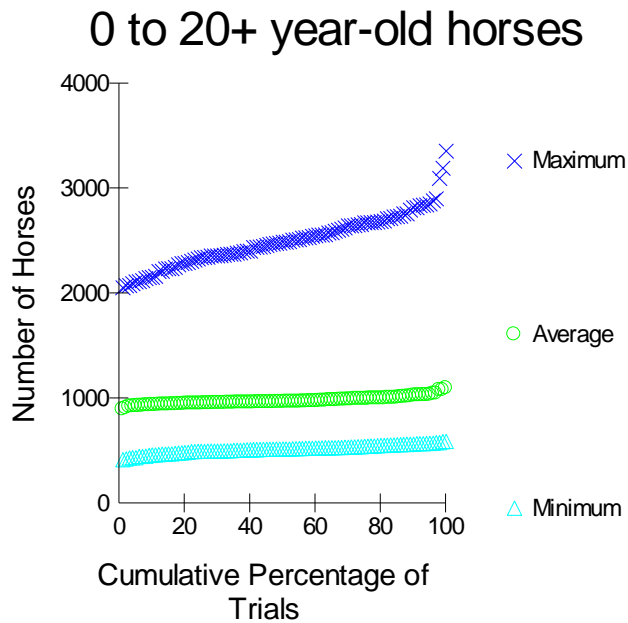
Lowest Trial	8.5
10th Percentile	11.8
25th Percentile	13.2
Median Trial	14.1
75th Percentile	15.4
90th Percentile	16.5
Highest Trial	18.5

## Antelope Complex NV Gather and Removal Only Alternative C



The two horizontal lines above reflect the low AML (427) and the high AML (788).

### Population Size



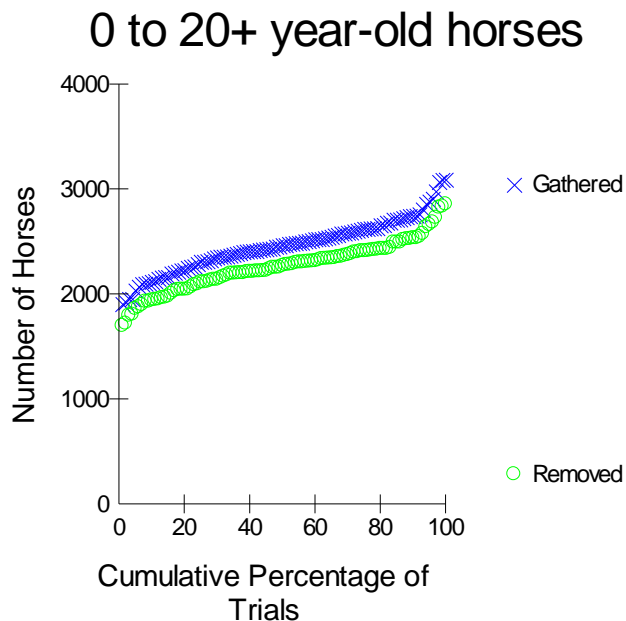
# Antelope Complex Gather Capture Plan and EA

	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	416	895	2056
10th Percentile	462	937	2161
25th Percentile	498	953	2344
Median Trial	518	967	2491
75th Percentile	546	996	2676
90th Percentile	567	1028	2818
Highest Trial	591	1096	3357

\* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number of 0 to 20+ year old horses ever obtained was 416 and the highest was 3357. In half of the trials, half the trials, the minimum population size in 11 years was less than 518 and the maximum was less than 2491. The average population size across 11 years ranged from 895 to 1096.

## Gathers



	Totals in 11 Years*	
	Gathered	Removed
Lowest Trial	1906	1700
10th Percentile	2121	1945
25th Percentile	2309	2114
Median Trial	2466	2274
75th Percentile	2622	2412
90th Percentile	2748	2534
Highest Trial	3092	2857

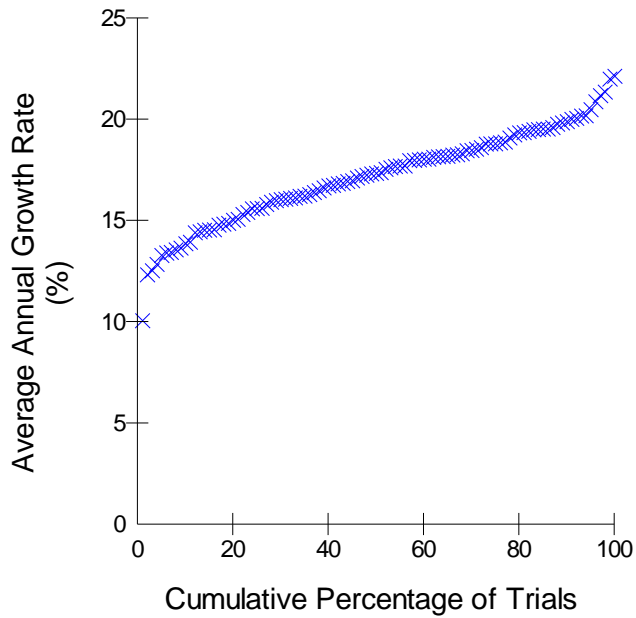
\* 0 to 20+ year-old horses

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## Antelope Complex Gather Capture Plan and EA

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### Growth Rate

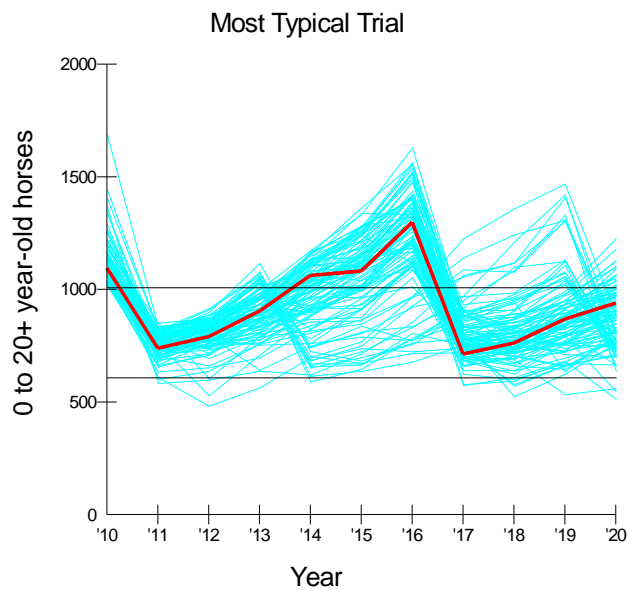


#### Average Growth Rate in 10 Years

Lowest Trial	10.1
10th Percentile	13.9
25th Percentile	15.6
Median Trial	17.4
75th Percentile	18.8
90th Percentile	20.0
Highest Trial	22.2

## Antelope Complex NV Removal and apply fertility control Alternative D\*

\*This model does not take account for wild horses moving into the Spruce Allotment from adjacent allotments and/or HMAs.



The two horizontal lines above reflect the (400 head) and the (1009 head).

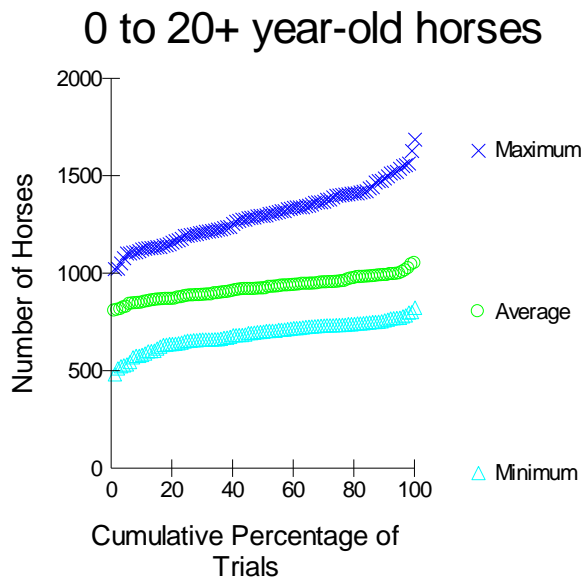


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## Antelope Complex Gather Capture Plan and EA

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### Population Size



	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	484	808	1025
10th Percentile	588	851	1127
25th Percentile	656	885	1198
Median Trial	704	922	1299
75th Percentile	738	958	1403
90th Percentile	763	991	1496
Highest Trial	826	1052	1689

\* 0 to 20+ year-old horses

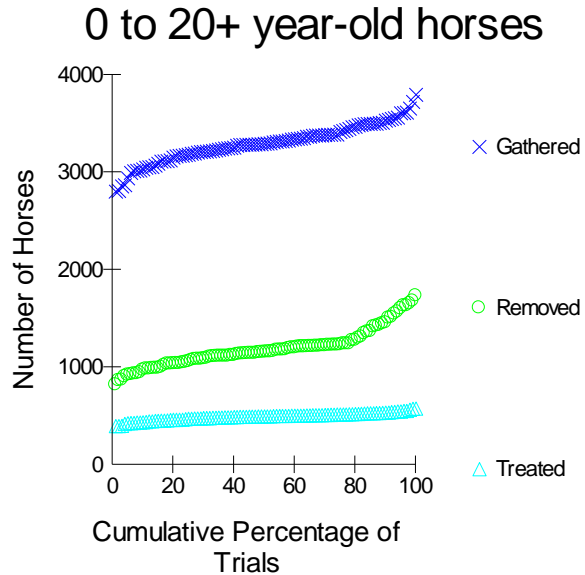
In 11 yrs and 100 trials, the lowest number of 0 to 20+ yr old horses ever obtained was 484 and the highest was 1,689. In half the trials the minimum population size in 11 yrs was less than 704 and the maximum was less than 1299. The average population size in 11 yrs ranged from 808 to 1052.

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## Antelope Complex Gather Capture Plan and EA

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### Gathers



	Totals in 11 Years*		
	Gathered	Removed	Treated
Lowest Trial	2805	821	397
10th Percentile	3040	978	438
25th Percentile	3188	1064	472
Median Trial	3296	1156	497
75th Percentile	3421	1235	516
90th Percentile	3536	1480	536
Highest Trial	3797	1733	578

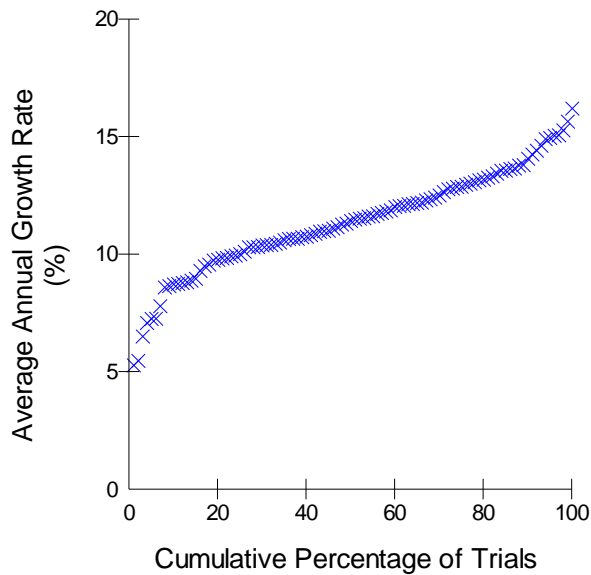
\* 0 to 20+ year-old horses

\*Total removed does not take account for wild horses moving into the Spruce Allotment from adjacent allotments and/or HMAs.

## Antelope Complex Gather Capture Plan and EA

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Growth Rate\*

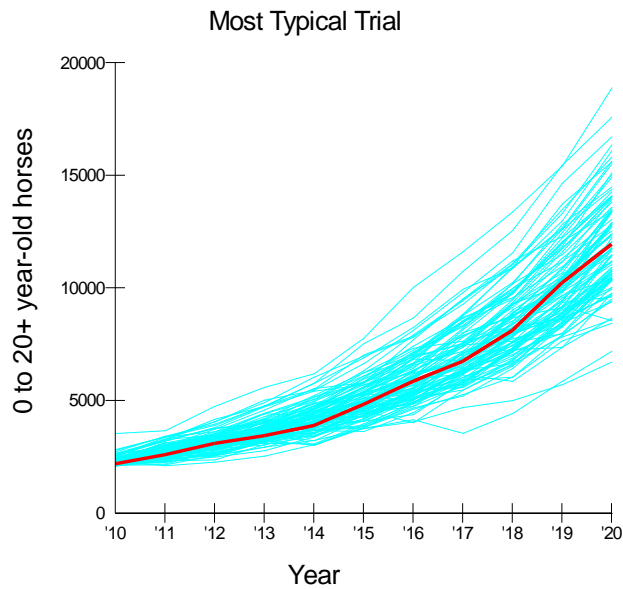


Average Growth Rate in 10 Years

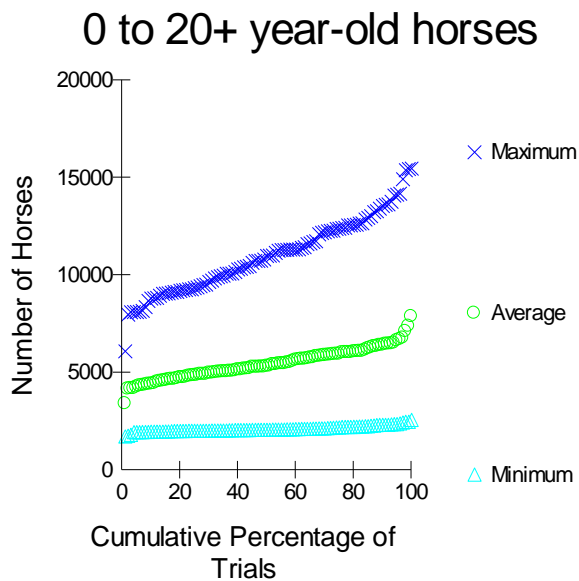
Lowest Trial	5.3
10th Percentile	8.7
25th Percentile	10.1
Median Trial	11.5
75th Percentile	12.9
90th Percentile	14.2
Highest Trial	16.2

\*average growth rate does not take account for wild horses moving into the Spruce Allotment from adjacent allotments and/or HMAs.

## Antelope Complex NV No Action



### Population Size



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## Antelope Complex Gather Capture Plan and EA

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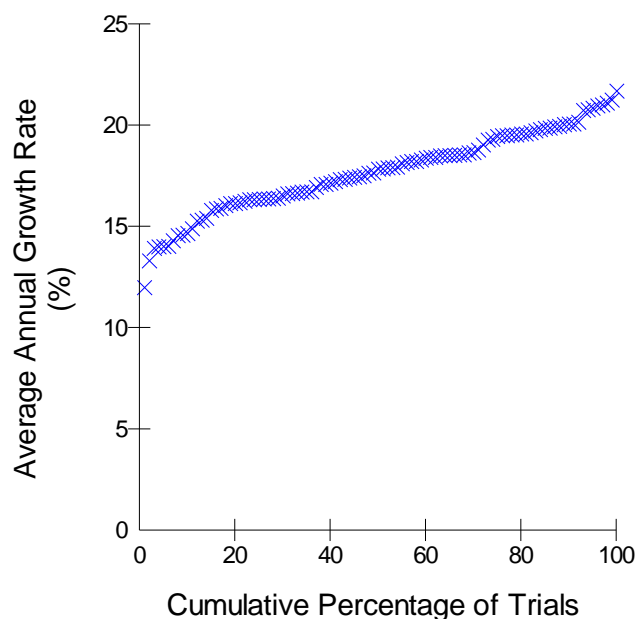
### Population Sizes in 11 Years\*

	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Lowest Trial	2098	3831	6719
10th Percentile	2133	4958	9634
25th Percentile	2188	5289	10482
Median Trial	2275	5724	11814
75th Percentile	2398	6414	13491
90th Percentile	2571	7019	15091
Highest Trial	3549	9178	18906

\* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number of 0 to 20+ year old horses ever obtained was 2098 and the highest was 18906. In half of the trials, the minimum population size in 11 years was less than 2275 and the maximum was less than 11814. The average population size across 11 years ranged from 3831 to 9178.

### Growth



### Average Growth Rate in 10 Years

Lowest Trial	12.0
10th Percentile	14.8
25th Percentile	16.4
Median Trial	17.9
75th Percentile	19.5
90th Percentile	20.1
Highest Trial	21.7



# Antelope Complex Gather Capture Plan and EA

## Appendix I

### Antelope Complex Water Resources

Legal Description	Map ID	Source Name	Source Type	Flow Type	Flow Rate (gal/min) <sup>1</sup>	Type of negative impacts				*PFC Rating <sup>2</sup>
						Grazing/Hoof action	Horses	Cattle	Diversion	
T. 26 N., R. 65 E., Sec 01	1	Currie Flats Well	Well	Intermittent						
T. 26 N., R. 67 E., Sec 16	2	PERKINS SPRING	Spring	Perennial	0.33		x			FARD
T. 27 N., R. 68 E., Sec 04	3	ANTELOPE PIPELINE	Conveyance	Intermittent	0.2					
T. 28 N., R. 64 E., Sec 13	4	MUSTANG WELL	Well	Intermittent						
T. 28 N., R. 64 E., Sec 36	5	Red Tank Well	Well	Intermittent						
T. 28 N., R. 66 E., Sec 04	6	VICTORIA SPRING	Spring	Intermittent	0.5	x	x			FARD
T. 28 N., R. 66 E., Sec 06	7		Spring	Perennial	0.71	x	x			
T. 28 N., R. 66 E., Sec 14	8	Austin Spring	Spring	Perennial	0.05	x	x			
T. 28 N., R. 68 E., Sec 08	9	HIGHWAY WELL	Well	Intermittent						
T. 28 N., R. 68 E., Sec 27		WHITEHORSE SP	Spring	Intermittent						
T. 29 N., R. 65 E., Sec 09	10	CORDANE WELL	Well	Intermittent						
T. 29 N., R. 65 E., Sec 31	11	East Walker Well	Well	Intermittent						
T. 29 N., R. 65 E., Sec 25			Seep	Perennial	0					PFC
T. 29 N., R. 65 E., Sec 25	12	Deer Spring	Conveyance	Perennial	0.2					
T. 29 N., R. 65	13	Walker Well	Well	Intermittent						

## Antelope Complex Gather Capture Plan and EA

Legal	Map	Source Name	Source	Flow Type	Flow	Type of negative impacts				*PFC
E., Sec 31										
T. 29 N., R. 66 E., Sec 19			Spring	Perennial						
T. 29 N., R. 66 E., Sec 28			Spring	Perennial	0	x	x			FARD
T. 29 N., R. 66 E., Sec 29	14		Spring	Intermittent	1	x	x		x	FARD
T. 29 N., R. 66 E., Sec 31			Seep	Perennial	0					
T. 29 N., R. 66 E., Sec 31			Spring	Perennial	0					NF
T. 29 N., R. 66 E., Sec 31	15		Spring	Perennial	0.0625				x	NF
T. 29 N., R. 66 E., Sec 31	16		Spring	Perennial						NF
T. 29 N., R. 66 E., Sec 33			Spring	Intermittent	0	x	x			
T. 29 N., R. 68 E., Sec 06	17	ITCAINA BLACK PT WL	Well	Perennial						
T. 29 N., R. 69 E., Sec 05	18	DEAD CEDAR SP	Spring	Perennial	0.1	x	x			NF
T. 30 N., R. 63 E., Sec 02	19	BASCO SP	Spring	Perennial	3.2				x	FARD
T. 30 N., R. 63 E., Sec 21	20	Gravel Pit Well	Well	Intermittent						
T. 30 N., R. 65 E., Sec 06		SEC 6 SP	Seep	Intermittent	0					
T. 30 N., R. 65 E., Sec 16	21	SPRUCE WELL	Well	Intermittent						
T. 30 N., R. 67 E., Sec 10	22	BLACK POINT WELL	Well	Intermittent						
T. 30 N., R. 68 E., Sec 12			Spring	Perennial	0.3					
T. 30 N., R. 68 E., Sec 12	23	FELT SP	Spring	Perennial	1.1	x			x	FARD

## Antelope Complex Gather Capture Plan and EA

Legal	Map	Source Name	Source	Flow Type	Flow	Type of negative impacts				*PFC
T. 30 N., R. 69 E., Sec 17	24	LITTLE MUD SP	Spring	Perennial	0.03					FARN
T. 30 N., R. 69 E., Sec 33	25		Spring	Perennial	1.4					
T. 30 N., R. 69 E., Sec 36	26	East Hwy Well	Well	Intermittent						
T. 31 N., R. 63 E., Sec 01	27		Spring	Perennial	1					
T. 31 N., R. 63 E., Sec 12	28	F. B. Spring	Spring	Perennial	2.5	x	x	x		NF
T. 31 N., R. 63 E., Sec 12	29	LATHAM SP	Spring	Perennial	3.6					FARN
T. 31 N., R. 63 E., Sec 22	30	B SP	Conveyance	Perennial	1					
T. 31 N., R. 63 E., Sec 26	31	TOWNSITE SP	Spring	Perennial	11					
T. 31 N., R. 63 E., Sec 27		A SP	Spring	Perennial	0	x	x	x		FARN
T. 31 N., R. 63 E., Sec 36	32		Spring	Perennial	4	x				FARD
T. 31 N., R. 63 E., Sec 36	33		Spring	Intermittent	0					
T. 31 N., R. 64 E., Sec 06	34	South Latham Spring	Seep	Intermittent	0.02				x	NF
T. 31 N., R. 64 E., Sec 18	35	Side Hill Spring	Spring	Perennial	1.82	x				
T. 31 N., R. 65 E., Sec 25	36	Lower Spruce Well	Well	Intermittent						
T. 31 N., R. 65 E., Sec 20	37	LOWER BOONE SP	Spring	Perennial	0.58				x	FARD
T. 31 N., R. 66 E., Sec 07	38	WAREHOUSE WELL	Well	Intermittent						
T. 31 N., R. 67 E., Sec 14	39	BASQUE WELL	Well	Intermittent						
T. 31 N., R. 67		SHAFTER WELL	Well	Perennial						

## Antelope Complex Gather Capture Plan and EA

Legal	Map	Source Name	Source	Flow Type	Flow	Type of negative impacts				*PFC
E., Sec 35		NO4								
T. 31 N., R. 68 E., Sec 16	40	LION SP	Spring	Perennial	0.3					
T. 31 N., R. 68 E., Sec 27		SERVICEBERRY SP	Seep	Intermittent	0					
T. 31 N., R. 68 E., Sec 27			Spring	Intermittent						
T. 32 N., R. 63 E., Sec 20	41	SORENSEN DEEP WELL	Well	Intermittent						
T. 32 N., R. 64 E., Sec 17	42		Well	Intermittent						
T. 32 N., R. 67 E., Sec 04	43		Spring	Perennial	0.1					
T. 32 N., R. 67 E., Sec 36	44	SHAFTER WELL 3	Well	Intermittent						
T. 32 N., R. 68 E., Sec 14	45		Spring	Perennial	0.03					
T. 32 N., R. 68 E., Sec 14	46	SIDEHILL SP	Spring	Perennial	12		x			FARD
T. 32 N., R. 68 E., Sec 15	47		Spring	Perennial	0.3					
T. 32 N., R. 68 E., Sec 15	48	UPPER MORGAN SP	Spring	Perennial	6		x			NF
T. 32 N., R. 68 E., Sec 22	49	LOWER MORGAN SP	Spring	Perennial	3					
T. 32 N., R. 68 E., Sec 22	50	SUMMIT SP	Spring	Perennial	1.33		x		x	NF
T. 32 N., R. 68 E., Sec 24	51	MUD SPRINGS	Spring	Perennial	0.2					PFC
T. 32 N., R. 68 E., Sec 26	52	SP GULCH SP	Spring	Perennial	1	x				NF
T. 32 N., R. 68 E., Sec 33		CHOCKCHERRY SP	Spring	Intermittent	0					PFC
T. 32 N., R. 68 E., Sec 33	53	CHOKECHERRY SP	Spring	Perennial	4					PFC

## Antelope Complex Gather Capture Plan and EA

Legal	Map	Source Name	Source	Flow Type	Flow	Type of negative impacts				*PFC
T. 32 N., R. 69 E., Sec 19	54	SHEEP CAMP SPRING	Spring	Perennial	1	x			x	NF
T. 33 N., R. 63 E., Sec 28	55	SORENSEN WELL NO 6	Well	Intermittent						
T. 33 N., R. 65 E., Sec 10	56	JASPER WELL	Well	Intermittent						
T. 33 N., R. 67 E., Sec 35	57	SHAFTER WELL #2	Well	Intermittent						
T. 33 N., R. 68 E., Sec 10	58	ROCK SPRING	Spring	Perennial	0.5		x			
T. 33 N., R. 68 E., Sec 10	59	ROCK SP	Spring	Perennial	0.79		x			NF
T. 33 N., R. 68 E., Sec 11	60	MORRIS BASIN SP	Spring	Perennial	0.16				x	FARN
T. 33 N., R. 68 E., Sec 26		ROSEBUD SP	Spring	Intermittent	0					
T. 33 N., R. 68 E., Sec 34		ISABEL SP	Spring	Intermittent	0					PFC
T. 33 N., R. 68 E., Sec 35	61	ERICKSON SP	Spring	Perennial	0.16		x		x	NF
T. 34 N., R. 63 E., Sec 35	62	POINT SPRING	Spring	Perennial	0.5					
T. 34 N., R. 68 E., Sec 27			Spring	Perennial	1					
T. 34 N., R. 68 E., Sec 28	63	TUNNEL SPRING	Spring	Perennial	1		x			NF

<sup>1</sup> Spring flow varies by season and yearly reflecting climatic variables. Most listed springs will have flows that drop to nearly zero during dry conditions.

<sup>2</sup> PFC Rating: PFC = proper functioning condition; FARU = functioning at risk with upward trend; FARD = functioning at risk with downward trend; NF = non-functional.



# Antelope Complex Gather Capture Plan and EA

## Appendix J

### Wildlife Species Documented in the Antelope Complex

Common Name	Scientific Name	Special Designation
<i>Amphibians</i>		
Columbian Spotted Frog	<i>Rana luteiventris</i>	Federal Candidate Species
Great Basin Spadefoot	<i>Scaphiopus intermontanus</i>	None
Northern Leopard Frog	<i>Rana pipiens</i>	BLM Sensitive Species
<i>Birds</i>		
American Kestrel	<i>Falco sparverius</i>	Migratory Bird
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BLM Sensitive Species
Black-necked Stilt	<i>Himantopus mexicanus</i>	Migratory Bird
Blue Grouse	<i>Dendragapus obscurus</i>	None
Broad-winged Hawk	<i>Buteo platypterus</i>	Migratory Bird
Burrowing Owl	<i>Athene cunicularia</i>	BLM Sensitive Species
Cooper's Hawk	<i>Accipiter cooperii</i>	Migratory Bird
Chukar	<i>Alectoris chukar</i>	None
Ferruginous Hawk	<i>Buteo regalis</i>	BLM Sensitive Species
Flammulated Owl	<i>Otus flammeolus</i>	BLM Sensitive Species
Golden Eagle	<i>Aquila chrysaetos</i>	BLM Sensitive Species
Gray Partridge	<i>Perdix perdix</i>	None
Great Horned Owl	<i>Bubo virginianus</i>	Migratory Bird
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	Federal Candidate Species
Long-eared Owl	<i>Asio otus</i>	BLM Sensitive Species
Merlin	<i>Falco columbarius</i>	Migratory Bird
Northern Goshawk	<i>Accipiter gentilis</i>	BLM Sensitive Species
Northern Harrier	<i>Circus cyaneus</i>	Migratory Bird
Northern Pygmy Owl	<i>Glaucidium gnoma</i>	Migratory Bird
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	Migratory Bird
Peregrine Falcon	<i>Falco peregrinus</i>	BLM Sensitive Species
Prairie Falcon	<i>Falco mexicanus</i>	BLM Sensitive Species
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Migratory Bird
Rough-legged Hawk	<i>Buteo lagopus</i>	Migratory Bird
Sandhill Crane	<i>Grus canadensis</i>	BLM Sensitive Species
Scaled Quail	<i>Callipepla squamata</i>	None
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Migratory Bird
Steller's Jay	<i>Cyanocitta stelleri</i>	Migratory Bird
Swainson's Hawk	<i>Buteo swainsoni</i>	BLM Sensitive Species
Western Screech-owl	<i>Otus kennicottii</i>	Migratory Bird
White-faced Ibis	<i>Plegadis chihi</i>	Migratory Bird

# Antelope Complex Gather Capture Plan and EA

Appendix J continued.

Common Name	Scientific Name	Special Designation
<i>Mammals</i>		
Belding's Ground Squirrel	<i>Spermophilus beldingi</i>	None
Bighorn Sheep	<i>Ovis canadensis</i>	None
Bobcat	<i>Lynx rufus</i>	None
California Myotis	<i>Myotis californicus</i>	BLM Sensitive Species
Coyote	<i>Canis latrans</i>	None
Deermouse	<i>Peromyscus maniculatus</i>	None
Golden-mantled Ground Squirrel	<i>Spermophilus lateralis</i>	None
Gray Fox	<i>Urocyon cinereoargenteus</i>	None
Kit Fox	<i>Vulpes macrotis</i>	None
Least Chipmunk	<i>Tamias minimus</i>	None
Little Brown Bat	<i>Myotis lucifugus</i>	BLM Sensitive Species
Long-eared Myotis	<i>Myotis evotis</i>	BLM Sensitive Species
Long-legged Myotis	<i>Myotis volans</i>	BLM Sensitive Species
Long-tailed Vole	<i>Microtus longicaudus</i>	None
Mexican Tree-tailed Bat	<i>Tadarida brasiliensis</i>	BLM Sensitive Species
Montane Vole	<i>Microtus montanus</i>	None
Mountain Goat	<i>Oreamnos americanus</i>	None
Mountain Lion	<i>Felis concolor</i>	None
Mule Deer	<i>Odocoileus hemionus</i>	None
Pallid Bat	<i>Antrozous pallidus</i>	BLM Sensitive Species
Pronghorn	<i>Antilocapra americana</i>	None
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	BLM Sensitive Species
Rock Squirrel	<i>Spermophilus variegatus</i>	None
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	BLM Sensitive Species
Striped Skunk	<i>Mephitis mephitis</i>	None
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	BLM Sensitive Species
Uinta Chipmunk	<i>Tamias umbrinus</i>	None
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>	BLM Sensitive Species
Yuma Myotis	<i>Myotis yumanensis</i>	BLM Sensitive Species
<i>Reptiles</i>		
Desert Horned Lizard	<i>Phrynosoma platyrhinos</i>	None
Greater Short-horned Lizard	<i>Phrynosoma hernandesi</i>	None
Western Fence Lizard	<i>Sceloporus occidentalis</i>	None
Western Skink	<i>Eumeces skiltonianus</i>	None
<i>Fish</i>		
Relict Dace	<i>Relictus solitarius</i>	BLM Sensitive Species
<i>Insects</i>		
Dark Sandhill Skipper	<i>Polites sabuleti nigrescens</i>	None

## Antelope Complex Gather Capture Plan and EA

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### Appendix J Continued

Common Name	Scientific Name	Special Designation
<i>Mollusks</i>		
Crestless Column	<i>Pupilla hebes</i>	None
Lyrate Mountainsnail	<i>Oreohelix haydeni</i>	None
Mitered Vertigo	<i>Vertigo concinnula</i>	None
Rocky Mountain Column	<i>Pupilla blandi</i>	None
Rocky Mountainsnail	<i>Oreohelix strigosa</i>	None
Schell Creek Mountainsnail	<i>Oreohelix nevadensis</i>	BLM Sensitive Species
Silky Vallonia	<i>Vallonia cyclophorella</i>	None
Top-heavy Column	<i>Pupilla syngenes</i>	None
Transverse Gland Springsnail	<i>Pyrgulopsis cruciglans</i>	BLM Sensitive Species
Western Glass-snail	<i>Vitrina pellucida</i>	None
Western Ridged Mussel	<i>Gonidea angulata</i>	None
White Pine Mountainsnail	<i>Oreohelix hemphilli</i>	None

# Antelope Complex Gather Capture Plan and EA

## Appendix K

## Potential Terrestrial Vertebrates by Habitat

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds</b>													
Common Loon <i>Gavia immer</i>	Migratory								X		X	X	
Horned Grebe <i>Podiceps auritus</i>	Migratory								X		X	X	
Eared Grebe <i>Podiceps nigricollis</i>	Migratory								X		X	X	
Pied-billed Grebe <i>Podilymbus podiceps</i>	Migratory								X		X	X	
Western Grebe <i>Aechmophorus occidentalis</i>	Migratory								X		X	X	
Clark's Grebe <i>Aechmophorus clarkii</i>	Migratory								X		X	X	
American White Pelican <i>Pelecanus erythrorhynchos</i>	Migratory								X		X	X	
Double-crested Cormorant <i>Phalacrocorax auritus</i>	Migratory								X		X	X	
American Bittern <i>Botaurus lentiginosus</i>	Migratory									X			
Least Bittern <i>Ixobrychus exilis</i>	BLM Sens.								X		X	X	
Great Blue Heron <i>Ardea herodias</i>	Migratory								X	X	X	X	
Great Egret <i>Ardea alba</i>	Migratory								X	X	X	X	
Snowy Egret <i>Egretta thula</i>	Migratory								X	X	X	X	
Cattle Egret <i>Bubulcus ibis</i>	Migratory								X		X	X	
Green Heron <i>Butorides virescens</i>	Migratory								X		X	X	
Black-crowned Night Heron <i>Nycticorax nycticorax</i>	Migratory								X	X	X	X	
White-faced ibis <i>Plegadis chihi</i>	Migratory								X	X	X	X	
Tundra Swan <i>Cygnus columbianus</i>	Mig. Game								X		X	X	

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Trumpeter Swan <i>Cygnus buccinator</i>	Mig. Game								X		X	X	
Greater White-fronted Goose <i>Anser albifrons</i>	Mig. Game								X		X	X	
Ross' Goose <i>Chen rossii</i>	Mig. Game								X		X	X	
Snow Goose <i>Chen caerulescens</i>	Mig. Game								X		X	X	
Canada Goose <i>Branta canadensis</i>	Mig. Game								X	X	X	X	X
Wood Duck <i>Aix sponsa</i>	Mig. Game	X							X	X	X	X	
Mallard <i>Anas platyrhynchos</i>	Mig. Game	X							X	X	X	X	X
Northern Pintail <i>Anas acuta</i>	Mig. Game								X	X	X	X	X
Gadwall <i>Anas strepera</i>	Mig. Game								X	X	X	X	X
American Widgeon <i>Anas americana</i>	Mig. Game								X	X	X	X	X
Eurasian Widgeon <i>Anas penelope</i>	Mig. Game								X		X	X	
Northern Shoveler <i>Anas clypeata</i>	Mig. Game								X	X	X	X	
Blue-winged Teal <i>Anas discors</i>	Mig. Game								X	X	X	X	X
Cinnamon Teal <i>Anas cyanoptera</i>	Mig. Game								X	X	X	X	X
Green-winged Teal <i>Anas crecca</i>	Mig. Game								X	X	X	X	X
Lesser Scaup <i>Aythya affinis</i>	Mig. Game								X	X	X	X	X
Ring-necked Duck <i>Aythya collaris</i>	Mig. Game								X	X	X	X	X
Greater Scaup <i>Aythya marila</i>	Mig. Game								X		X	X	



# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Canvasback <i>Aythya valisineria</i>	Mig. Game								X		X	X	
Redhead <i>Aythya americana</i>	Mig. Game								X	X	X	X	
Long-tailed Duck <i>Clangula hyemalis</i>	Mig. Game								X		X	X	
Surf Scoter <i>Melanitta perspicillata</i>	Mig. Game								X		X	X	
White-winged Scoter <i>Melanitta fusca</i>	Mig. Game								X		X	X	
Common Goldeneye <i>Bucephala clangula</i>	Mig. Game	X							X	X	X	X	X
Barrow's Goldeneye <i>Bucephala islandica</i>	Mig. Game	X							X	X	X	X	
Bufflehead <i>Bucephala albeola</i>	Mig. Game	X							X	X	X	X	X
Common Merganser <i>Mergus merganser</i>	Mig. Game	X							X	X	X	X	X
Red-breasted Merganser <i>Mergus serrator</i>	Mig. Game								X	X	X	X	
Ruddy Duck <i>Oxyura jamaicensis</i>	Mig. Game								X	X	X	X	X
Hooded Merganser <i>Lophodytes cucullatus</i>	Mig. Game	X							X	X	X	X	X
Turkey Vulture <i>Cathartes aura</i>	Migratory	X	X		X	X	X	X	X	X	X	X	X
Northern Harrier <i>Circus cyaneus</i>	Migratory	X			X		X	X	X	X	X	X	X
Cooper's Hawk <i>Accipiter cooperii</i>	Migratory	X				X	X	X		X			
Sharp-shinned Hawk <i>Accipiter striatus</i>	Migratory	X				X	X			X			
Northern Goshawk <i>Accipiter gentilis</i>	BLM Sens.	X				X	X	X		X			X
Red-shouldered Hawk <i>Buteo lineatus</i>	Migratory									X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Broad-winged Hawk <i>Buteo platypterus</i>	Migratory	X					X			X			
Red-tailed Hawk <i>Buteo jamaicensis</i>	Migratory	X	X				X		X	X	X	X	
Swainson's Hawk <i>Buteo swainsoni</i>	BLM Sens.	X					X			X			
Ferruginous Hawk <i>Buteo regalis</i>	BLM Sens.		X				X	X	X	X	X	X	X
Rough-legged Hawk <i>Buteo lagopus</i>	Migratory							X	X	X	X	X	X
Osprey <i>Pandion haliaetus</i>	Migratory									X			
Golden Eagle <i>Aquila chrysaetos</i>	BLM Sens.	X	X		X		X	X	X	X	X	X	X
Bald Eagle <i>Haliaeetus leucocephalus</i>	BLM Sens.					X			X	X	X	X	
American Kestrel <i>Falco sparverius</i>	Migratory	X	X		X		X	X	X	X	X	X	X
Prairie Falcon <i>Falco mexicanus</i>	BLM Sens.	X	X		X		X	X	X	X	X	X	X
Merlin <i>Falco columbarius</i>	Migratory	X				X	X		X	X	X	X	
Peregrine Falcon <i>Falco peregrinus</i>	BLM Sens.	X	X			X			X	X	X	X	
Ring-necked Pheasant <i>Phasianus colchicus</i>	None								X	X	X	X	
Himalayan Snowcock <i>Tetraogallus himalayensis</i>	None	X	X				X			X			X
Gray Partridge <i>Perdix perdix</i>	None	X					X	X		X			
Chukar <i>Alectoris chukar</i>	None	X	X		X		X	X		X			X
Ruffed Grouse <i>Bonasa umbellus</i>	None	X								X			
Columbian Sharp-tailed Grouse <i>Tympanuchus phasianellus</i>	BLM Sens.	X					X	X		X			X

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Greater Sage Grouse <i>Centrocercus urophasianus</i>	Fed. Cand.	X					X	X		X			X
Blue Grouse <i>Dendragapus obscurus</i>	None	X				X	X			X			X
Wild Turkey <i>Meleagris gallopavo</i>	None	X								X			
Mountain Quail <i>Oreortyx pictus</i>	BLM Sens.	X				X	X	X		X			X
California Quail <i>Callipepla californica</i>	None	X			X		X	X	X	X	X	X	
Virginia Rail <i>Rallus limicola</i>	Mig. Game								X	X	X	X	
Sora <i>Porzana carolina</i>	Mig. Game								X	X	X	X	
Common Moorhen <i>Gallinula chloropus</i>	Mig. Game								X		X	X	
American Coot <i>Fulica americana</i>	Mig. Game								X		X	X	
Sandhill Crane <i>Grus canadensis</i>	BLM Sens.	X							X	X	X	X	X
Black-bellied Plover <i>Pluvialis squatarola</i>	Migratory								X		X	X	
Semipalmated Plover <i>Charadrius semipalmatus</i>	Migratory								X		X	X	
Snowy Plover <i>Charadrius alexandrinus</i>	BLM Sens.								X		X	X	
Killdeer <i>Charadrius vociferus</i>	Migratory	X							X	X	X	X	X
Mountain Plover <i>Charadrius montanus</i>	Migratory								X	X	X	X	X
Black-necked Stilt <i>Himantopus mexicanus</i>	Migratory								X	X	X	X	
American Avocet <i>Recurvirostra americana</i>	Migratory								X	X	X	X	
Greater Yellowlegs <i>Tringa melanoleuca</i>	Migratory								X	X	X	X	

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Lesser Yellowlegs <i>Tringa flavipes</i>	Migratory								X	X	X	X	
Solitary Sandpiper <i>Tringa solitaria</i>	Migratory								X	X	X	X	
Spotted Sandpiper <i>Actitis macularia</i>	Migratory	X							X	X	X	X	X
Long-billed Curlew <i>Numenius americanus</i>	BLM Sens.								X	X	X	X	
Marbled Godwit <i>Limosa fedoa</i>	Migratory								X	X	X	X	
Willet <i>Catoptrophorus semipalmatus</i>	Migratory								X	X	X	X	X
Baird's Sandpiper <i>Calidris bairdii</i>	Migratory								X		X	X	
Western Sandpiper <i>Calidris mauri</i>	Migratory								X	X	X	X	
Least Sandpiper <i>Calidris minutilla</i>	Migratory								X	X	X	X	
Long-billed Dowitcher <i>Limnodromus scolopaceus</i>	Migratory								X		X	X	
Wilson's Snipe <i>Gallinago delicata</i>	Migratory	X							X	X	X	X	X
Wilson's Phalarope <i>Phalaropus tricolor</i>	Migratory								X	X	X	X	X
Red-necked Phalarope <i>Phalaropus lobatus</i>	Migratory								X		X	X	
Bonaparte's Gull <i>Larus philadelphia</i>	Migratory								X	X	X	X	
Franklin's Gull <i>Larus pipixcan</i>	Migratory								X	X	X	X	
Ring-billed Gull <i>Larus delawarensis</i>	Migratory								X	X	X	X	
California Gull <i>Larus californicus</i>	Migratory								X	X	X	X	
Herring Gull <i>Larus argentatus</i>	Migratory								X		X	X	

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Black Tern <i>Chlidonias niger</i>	BLM Sens.								X	X	X	X	
Caspian Tern <i>Sterna caspia</i>	Migratory								X	X	X	X	
Forster's Tern <i>Sterna forsteri</i>	Migratory								X		X	X	
Rock Dove <i>Columba livia</i>	Mig. Game		X							X			
Band-tailed Pigeon <i>Columba fasciata</i>	Mig. Game	X				X				X			
White-winged Dove <i>Zenaida asiatica</i>	Mig. Game									X			
Mourning Dove <i>Zenaida macroura</i>	Mig. Game	X					X			X			
Yellow-billed Cuckoo <i>Coccyzus americanus</i>	Fed. Cand.									X			
Greater Roadrunner <i>Geococcyx californianus</i>	Migratory				X					X			
Barn Owl <i>Tyto alba</i>	Migratory		X						X	X	X	X	
Long-eared Owl <i>Asio otus</i>	BLM Sens.	X				X	X			X			
Short-eared Owl <i>Asio flammeus</i>	BLM Sens.						X		X	X	X	X	X
Flammulated Owl <i>Otus flammeolus</i>	BLM Sens.	X				X	X			X			
Western Screech-owl <i>Otus kennicottii</i>	Migratory	X				X	X			X			
Great Horned Owl <i>Bubo virginianus</i>	Migratory	X	X			X	X			X			
Northern Pygmy Owl <i>Glaucidium gnoma</i>	Migratory	X				X	X			X			
Burrowing Owl <i>Athene cunicularia</i>	BLM Sens.				X			X		X			X
Northern Saw-whet Owl <i>Aegolius acadicus</i>	Migratory	X				X				X			



# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Common Nighthawk <i>Chordeiles minor</i>	Migratory	X			X		X	X	X	X	X	X	X
Common Poor-will <i>Phalaenoptilus nuttallii</i>	Migratory	X	X		X	X	X	X		X			X
Belted Kingfisher <i>Ceryle alcyon</i>	Migratory	X							X	X	X	X	
White-throated Swift <i>Aeronautes saxatalis</i>	Migratory	X	X							X			
Black Swift <i>Cypseloides niger</i>	Migratory					X	X			X			
Black-chinned Hummingbird <i>Archilochus alexandri</i>	Migratory	X								X			
Calliope Hummingbird <i>Stellula calliope</i>	Migratory	X					X			X			X
Broad-tailed Hummingbird <i>Selasphorus platycercus</i>	Migratory	X								X			
Rufous Hummingbird <i>Selasphorus rufus</i>	Migratory	X			X	X	X	X		X			X
Northern Flicker <i>Colaptes auratus</i>	Migratory	X				X	X		X	X	X	X	X
Lewis's Woodpecker <i>Melanerpes lewis</i>	BLM Sens.	X				X				X			
Downy Woodpecker <i>Picoides pubescens</i>	Migratory	X				X	X			X			
Hairy Woodpecker <i>Picoides villosus</i>	Migratory	X				X	X			X			
Three-toed Woodpecker <i>Picoides tridactylus</i>	Migratory	X				X				X			
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i>	Migratory	X				X				X			
Red-breasted Sapsucker <i>Sphyrapicus ruber</i>	Migratory	X								X			
Red-naped Sapsucker <i>Sphyrapicus nuchalis</i>	BLM Sens.	X				X	X			X			
Yellow-bellied Sapsucker <i>Sphyrapicus varius</i>	Migratory	X								X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Olive-sided Flycatcher <i>Contopus cooperi</i>	Migratory	X				X				X			
Western Wood-pewee <i>Contopus sordidulus</i>	Migratory	X								X			
Willow Flycatcher <i>Empidonax traillii</i>	Migratory	X								X			X
Dusky Flycatcher <i>Empidonax oberholseri</i>	Migratory	X				X	X			X			
Hammond's Flycatcher <i>Empidonax hammondii</i>	Migratory	X				X				X			
Gray Flycatcher <i>Empidonax wrightii</i>	Migratory						X	X					
Cordilleran Flycatcher <i>Empidonax occidentalis</i>	Migratory	X								X			
Black Phoebe <i>Sayornis nigricans</i>	Migratory									X			
Say's Phoebe <i>Sayornis saya</i>	Migratory		X										
Ash-throated Flycatcher <i>Myiarchus cinerascens</i>	Migratory	X					X			X			
Western Kingbird <i>Tyrannus verticalis</i>	Migratory	X								X			
Eastern Kingbird <i>Tyrannus tyrannus</i>	Migratory	X							X	X	X	X	
Northern Shrike <i>Lanius excubitor</i>	Migratory									X			
Loggerhead Shrike <i>Lanius ludovicianus</i>	BLM Sens.				X		X	X					
Gray Vireo <i>Vireo vicinior</i>	BLM Sens.						X						
Plumbeous Vireo <i>Vireo plumbeus</i>	Migratory	X					X						
Blue-headed Vireo <i>Vireo solitarius</i>	Migratory	X								X			
Warbling Vireo <i>Vireo gilvus</i>	Migratory	X								X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Red-eyed Vireo <i>Vireo olivaceus</i>	Migratory	X								X			
Steller's Jay <i>Cyanocitta stelleri</i>	Migratory	X				X	X			X			
Western Scrub-jay <i>Aphelocoma californica</i>	Migratory						X						
Pinyon Jay <i>Gymnorhinus cyanocephalus</i>	BLM Sens.						X						
Clark's Nutcracker <i>Nucifraga columbiana</i>	Migratory	X				X	X			X			
Black-billed Magpie <i>Pica hudsonia</i>	Migratory	X					X			X			
American Crow <i>Corvus brachyrhynchos</i>	None	X							X	X	X	X	
Common Raven <i>Corvus corax</i>	Migratory	X	X			X	X			X			
Horned Lark <i>Eremophila alpestris</i>	Migratory				X			X		X			X
Tree Swallow <i>Tachycineta bicolor</i>	Migratory	X							X	X	X	X	
Violet-green Swallow <i>Tachycineta thalassina</i>	Migratory	X	X						X	X	X	X	
Northern Rough-winged Swallow <i>Stelgidopteryx serripennis</i>	Migratory	X							X	X	X	X	
Bank Swallow <i>Riparia riparia</i>	Migratory								X	X	X	X	
Barn Swallow <i>Hirundo rustica</i>	Migratory		X						X	X	X	X	
Cliff Swallow <i>Petrochelidon pyrrhonota</i>	Migratory	X	X						X	X	X	X	
Juniper Titmouse <i>Baeolophus ridgwayi</i>	BLM Sens.						X						
Black-capped Chickadee <i>Poecile atricapilla</i>	Migratory	X				X	X			X			
Mountain Chickadee <i>Poecile gambeli</i>	Migratory	X				X	X			X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Bushtit <i>Psaltirparus minimus</i>	Migratory	X			X		X	X		X			
White-breasted Nuthatch <i>Sitta carolinensis</i>	Migratory	X				X	X			X			
Red-breasted Nuthatch <i>Sitta canadensis</i>	Migratory	X				X	X			X			
Pygmy Nuthatch <i>Sitta pygmaea</i>	Migratory	X				X				X			
Brown Creeper <i>Certhia americana</i>	Migratory	X				X				X			
Marsh Wren <i>Cistothorus palustris</i>	Migratory								X		X	X	
Bewick's Wren <i>Thryomanes bewickii</i>	Migratory						X			X			
House Wren <i>Troglodytes aedon</i>	Migratory	X								X			
Winter Wren <i>Troglodytes troglodytes</i>	Migratory	X				X	X			X			
Rock Wren <i>Salpinctes obsoletus</i>	Migratory		X										
Canyon Wren <i>Catherpes mexicanus</i>	Migratory		X										
American Dipper <i>Cinclus mexicanus</i>	Migratory	X								X			
Golden-crowned Kinglet <i>Regulus satrapa</i>	Migratory	X				X				X			
Ruby-crowned Kinglet <i>Regulus calendula</i>	Migratory	X					X			X			
Blue-gray Gnatcatcher <i>Polioptila caerulea</i>	Migratory	X					X			X			
Mountain Bluebird <i>Sialia currucoides</i>	Migratory	X	X				X	X		X			X
Western Bluebird <i>Sialia mexicana</i>	Migratory	X				X	X			X			
Townsend's Solitaire <i>Myadestes townsendi</i>	Migratory	X				X	X			X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Varied Thrush <i>Ixoreus naevius</i>	Migratory	X				X				X			
American Robin <i>Turdus migratorius</i>	Migratory	X				X	X			X			
Veery <i>Catharus fuscescens</i>	Migratory	X								X			
Swainson's Thrush <i>Catharus ustulatus</i>	Migratory	X								X			
Hermit Thrush <i>Catharus guttatus</i>	Migratory	X				X	X			X			
Northern Mockingbird <i>Mimus polyglottos</i>	Migratory						X			X			
Gray Catbird <i>Dumetella carolinensis</i>	Migratory	X								X			
Sage Thrasher <i>Oreoscoptes montanus</i>	Migratory				X			X					
American Pipet <i>Anthus rubescens</i>	Migratory				X				X	X	X	X	X
Bohemian Waxwing <i>Bombycilla garrulus</i>	Migratory	X				X	X			X			
Cedar Waxwing <i>Bombycilla cedrorum</i>	Migratory	X				X	X			X			
European Starling <i>Sturnus vulgaris</i>	None	X								X			
Orange-crowned Warbler <i>Vermivora celata</i>	Migratory	X					X			X			
Nashville Warbler <i>Vermivora ruficapilla</i>	Migratory					X	X						
Virginia's Warbler <i>Vermivora virginiae</i>	Migratory	X					X			X			
Yellow Warbler <i>Dendroica petechia</i>	Migratory	X								X			
Chestnut-sided Warbler <i>Dendroica pensylvanica</i>	Migratory	X								X			
Townsend's Warbler <i>Dendroica townsendi</i>	Migratory	X				X				X			



# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Hermit Warbler <i>Dendroica occidentalis</i>	Migratory					X							
Black-throated Gray Warbler <i>Dendroica nigrescens</i>	Migratory						X						
Yellow-rumped Warbler <i>Dendroica coronata</i>	Migratory	X				X	X			X			
Blackpoll Warbler <i>Dendroica striata</i>	Migratory						X			X			
Northern Waterthrush <i>Seiurus noveboracensis</i>	Migratory									X			
MacGillivray's Warbler <i>Oporornis tolmiei</i>	Migratory	X								X			
Common Yellowthroat <i>Geothlypis trichas</i>	Migratory	X							X	X	X	X	
Wilson's Warbler <i>Wilsonia pusilla</i>	Migratory	X								X			
Yellow-breasted Chat <i>Icteria virens</i>	BLM Sens.	X								X			
Western Tanager <i>Piranga ludoviciana</i>	Migratory	X				X	X			X			
Summer Tanager <i>Piranga rubra</i>	Migratory									X			
Lazuli Bunting <i>Passerina amoena</i>	Migratory	X					X			X			
Indigo Bunting <i>Passerina cyanea</i>	Migratory	X								X			
Blue Grosbeak <i>Passerina caerulea</i>	Migratory	X								X			
Black-headed Grosbeak <i>Pheucticus melanocephalus</i>	Migratory	X					X			X			
Rose-breasted Grosbeak <i>Pheucticus ludovicianus</i>	Migratory	X					X			X			
Spotted Towhee <i>Pipilo maculatus</i>	Migratory	X					X			X			
Green-tailed Towhee <i>Pipilo chlorurus</i>	Migratory	X					X			X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Black-throated Sparrow <i>Amphispiza bilineata</i>	Migratory				X			X					
Sage Sparrow <i>Amphispiza belli</i>	Migratory <sup>2</sup>				X			X					
Chipping Sparrow <i>Spizella passerina</i>	Migratory	X				X	X			X			
Brewer's Sparrow <i>Spizella breweri</i>	Migratory <sup>2</sup>	X						X		X			
American Tree Sparrow <i>Spizella arborea</i>	Migratory	X					X			X			
Vesper Sparrow <i>Poocetes gramineus</i>	BLM Sens.	X					X	X		X			X
Lark Sparrow <i>Chondestes grammacus</i>	Migratory	X			X		X	X		X			
Savannah Sparrow <i>Passerculus sandwichensis</i>	Migratory								X	X	X	X	X
Grasshopper Sparrow <i>Ammodramus savannarum</i>	Migratory									X			
Fox Sparrow <i>Passeralla iliaca</i>	Migratory	X					X			X			
Song Sparrow <i>Melospiza melodia</i>	Migratory	X							X	X	X	X	X
Lincoln's Sparrow <i>Melospiza lincolnii</i>	Migratory	X								X			X
Dark-eyed Junco – (all subspecies) <i>Junco hyemalis</i>	Migratory	X				X				X			
Harris' Sparrow <i>Zonotrichia querula</i>	Migratory	X								X			
White-crowned Sparrow <i>Zonotrichia leucophrys</i>	Migratory	X					X			X			X
Golden-crowned Sparrow <i>Zonotrichia atricapilla</i>	Migratory						X			X			
White-throated Sparrow <i>Zonotrichia albicollis</i>	Migratory	X								X			
Lapland Longspur <i>Calcarius lapponicus</i>	Migratory				X					X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Snow Bunting <i>Plectrophenax nivalis</i>	Migratory	X			X			X	X	X	X	X	
Northern Oriole <i>Icterus bullockii</i>	Migratory	X								X			
Scott's Oriole <i>Icterus parisorum</i>	Migratory						X						
Western Meadowlark <i>Sturnella neglecta</i>	Migratory	X			X		X	X		X			X
Bobolink <i>Dolichonyx oryzivorus</i>	BLM Sens.	X								X			
Red-winged Blackbird <i>Agelaius phoeniceus</i>	Migratory	X							X	X	X	X	
Yellow-headed Blackbird <i>Xanthocephalus xanthocephalus</i>	Migratory								X		X	X	
Brewer's Blackbird <i>Euphagus cyanocephalus</i>	Migratory	X					X		X	X	X	X	X
Great-tailed Grackle <i>Quiscalus mexicanus</i>	Migratory								X	X	X	X	
Common Grackle <i>Quiscalus quiscula</i>	Migratory	X								X			
Brown-headed Cowbird <i>Molothrus ater</i>	Migratory	X					X	X	X	X	X	X	X
Gray-crowned Rosy-finch <i>Leucosticte tephrocotis</i>	Migratory		X				X						
Black Rosy-finch <i>Leucosticte atrata</i>	BLM Sens.		X				X	X					
Red Crossbill <i>Loxia curvirostra</i>	Migratory	X				X				X			
Evening Grosbeak <i>Coccothraustes vespertinus</i>	Migratory	X				X				X			
House Finch <i>Carpodacus mexicanus</i>	Migratory	X								X			
Purple Finch <i>Carpodacus purpureus</i>	Migratory	X					X			X			
Cassin's Finch <i>Carpodacus cassinii</i>	Migratory	X				X	X			X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Birds (continued)</b>													
Lesser Goldfinch <i>Carduelis psaltria</i>	Migratory	X				X	X			X			
American Goldfinch <i>Carduelis tristis</i>	Migratory	X			X	X	X	X	X	X	X	X	
Pine Siskin <i>Carduelis pinus</i>	Migratory	X				X				X			
Common Redpoll <i>Carduelis flammea</i>	Migratory	X					X			X			X
Pine Grosbeak <i>Pinicola enucleator</i>	Migratory	X				X				X			
House Sparrow <i>Passer domesticus</i>	None									X			
<b>Mammals</b>													
Merriam's Shrew <i>Sorex merriami</i>	None					X	X	X					
Dusky Shrew <i>Sorex monticolus</i>	None	X				X	X		X	X	X	X	X
Vagrant Shrew <i>Sorex vagrans</i>	None	X			X	X	X	X	X	X	X	X	X
Water Shrew <i>Sorex palustris</i>	None	X			X	X	X	X	X	X	X	X	X
Preble's Shrew <i>Sorex preblei</i>	BLM Sens.	X				X		X	X	X	X	X	X
Pallid Bat <i>Antrozous pallidus</i>	BLM Sens.		X	X	X		X	X	X		X	X	X
Townsend's Big-eared Bat <i>Corynorhinus townsendii</i>	BLM Sens.	X	X		X	X	X	X	X	X	X	X	X
Big Brown Bat <i>Eptesicus fuscus</i>	BLM Sens.	X	X		X	X	X	X	X	X	X	X	X
Spotted Bat <i>Euderma maculatum</i>	BLM Sens.	X	X			X	X	X	X	X	X	X	X
Silver-haired Bat <i>Lasionycteris noctivagans</i>	BLM Sens.	X			X	X	X	X	X	X	X	X	X
Western Red Bat <i>Lasiurus blossevillei</i>	BLM Sens.	X				X	X	X	X	X	X	X	X
Hoary Bat <i>Lasiurus cinereus</i>	BLM Sens.	X				X	X	X	X	X	X	X	X

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Mammals (continued)</b>													
California Myotis <i>Myotis californicus</i>	BLM Sens.	X	X	X	X	X	X	X	X	X	X	X	X
Western Small-footed Myotis <i>Myotis ciliolabrum</i>	BLM Sens.	X	X		X	X	X	X	X	X	X	X	X
Long-eared Myotis <i>Myotis evotis</i>	BLM Sens.	X	X		X	X	X	X	X	X	X	X	X
Little Brown Bat <i>Myotis lucifugus</i>	BLM Sens.	X	X		X	X	X	X	X	X	X	X	X
Fringed Myotis <i>Myotis thysanodes</i>	BLM Sens.	X	X	X	X	X	X	X	X	X	X	X	X
Long-legged Myotis <i>Myotis volans</i>	BLM Sens.	X	X	X	X	X	X	X	X	X	X	X	X
Yuma Myotis <i>Myotis yumanensis</i>	BLM Sens.	X	X		X	X	X	X	X	X	X	X	X
Western Pipistrelle <i>Pipistrellus hesperus</i>	BLM Sens.		X		X	X	X	X	X	X	X	X	X
Brazilian Free-tailed Bat <i>Tadarida brasiliensis</i>	BLM Sens.		X		X		X	X	X		X	X	X
Pika <i>Ochotona princeps</i>	None	X				X	X						X
White-tailed Jack Rabbit <i>Lepus townsendii</i>	None	X				X	X	X		X			X
Snowshoe Hare <i>Lepus americanus</i>	None	X				X			X	X	X	X	X
Black-tailed Jack Rabbit <i>Lepus californicus</i>	None			X	X	X	X	X					
Nuttall's Cottontail <i>Sylvilagus nuttallii</i>	None	X				X	X	X		X			
Desert Cottontail <i>Sylvilagus audubonii</i>	None				X		X	X					
Pygmy Rabbit <i>Brachylagus idahoensis</i>	BLM Sens.				X		X	X					
Yellow-bellied Marmot <i>Marmota flaviventris</i>	None	X			X	X	X	X		X			X
Townsend's Ground Squirrel <i>Spermophilus townsendii</i>	None				X		X	X					



# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Mammals (continued)</b>													
Wyoming Ground Squirrel <i>Spermophilus elegans</i>	None				X		X	X					
Belding's Ground Squirrel <i>Spermophilus beldingi</i>	None	X			X	X	X	X					
White-tailed Antelope Squirrel <i>Ammospermophilus leucurus</i>	None				X	X	X	X					
Golden-mantled Ground Squirrel <i>Spermophilus lateralis</i>	None	X				X	X			X			X
Least Chipmunk <i>Tamias minimus</i>	None	X			X	X	X	X		X			
Yellow-pine Chipmunk <i>Tamias amoenus</i>	None	X				X				X			
Cliff Chipmunk <i>Tamias dorsalis</i>	None					X	X						
Uinta Chipmunk <i>Tamias umbrinus</i>	None	X				X	X			X			
Northern Pocket Gopher <i>Thomomys talpoides</i>	None	X				X	X			X			X
Townsend's Pocket Gopher <i>Thomomys townsendii</i>	None				X			X					
Botta's Pocket Gopher <i>Thomomys bottae</i>	None	X			X	X	X	X					X
Southern Pocket Gopher <i>Thomomys umbrinus</i>	None	X			X	X	X	X					X
Little Pocket Mouse <i>Perognathus longimembris</i>	None				X		X	X					
Great Basin Pocket Mouse <i>Perognathus parvus</i>	None	X		X	X		X	X		X			
Dark Kangaroo Mouse <i>Microdipodops megacephalus</i>	None				X			X					
Ord's Kangaroo Rat <i>Dipodomys ordii</i>	None			X	X		X	X	X	X	X	X	X
Chisel-toothed Kangaroo Rat <i>Dipodomys microps</i>	None				X		X	X					
Western Harvest Mouse <i>Reithrodontomys megalotis</i>	None			X	X	X	X	X	X	X	X	X	X

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

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<b>Mammals (continued)</b>													
Canyon Mouse <i>Peromyscus crinitus</i>	None				X	X	X	X					
Deer Mouse <i>Peromyscus maniculatis</i>	None	X			X	X	X	X	X	X	X	X	X
Brush Mouse <i>Peromyscus boylii</i>	None				X	X	X	X					
Piñon Mouse <i>Peromyscus truei</i>	None				X	X	X	X					
Northern Grasshopper Mouse <i>Onychomys leucogaster</i>	None				X		X	X					
Desert Woodrat <i>Neotoma lepida</i>	None				X	X	X	X					
Bushy-tailed Woodrat <i>Neotoma cinerea</i>	None	X				X	X	X		X			
Montane Vole <i>Microtus montanus</i>	None	X			X	X	X	X	X	X	X	X	X
Long-tailed Vole <i>Microtus longicaudus</i>	None	X				X		X		X			
Sagebrush Vole <i>Lemmyscus curtatus</i>	None	X		X	X	X	X	X		X			
Muskrat <i>Ondatra zibethicus</i>	None	X			X	X	X	X	X	X	X	X	X
Beaver <i>Castor canadensis</i>	None	X			X	X	X	X	X	X	X	X	X
Black Rat <i>Rattus rattus</i>	None				X		X	X					
House Mouse <i>Mus musculus</i>	None				X		X	X					
Western Jumping Mouse <i>Zapus princeps</i>	None	X				X	X		X	X	X	X	X
Porcupine <i>Erethizon dorsatum</i>	None	X			X	X	X	X	X	X	X	X	X
Gray Wolf <i>Canis lupus</i>	None	X				X		X		X			
Coyote <i>Canis latrans</i>	None	X		X	X	X	X	X		X			X

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Mammals (continued)</b>													
Red Fox <i>Vulpes vulpes</i>	None	X				X	X	X		X			
Gray Fox <i>Urocyon cinereoargenteus</i>	None				X		X	X					
Kit Fox <i>Vulpes macrotis</i>	None				X		X	X					
Black Bear <i>Ursus americanus</i>	None	X				X				X			
Raccoon <i>Procyon lotor</i>	None	X			X	X	X	X	X	X	X	X	X
Wolverine <i>Gulo gulo</i>	None					X							X
American Marten <i>Martes americana</i>	None					X							
Ringtail <i>Bassariscus astutus</i>	None				X			X					
Ermine <i>Mustela erminea</i>	None	X				X			X	X	X	X	X
Long-tailed Weasel <i>Mustela frenata</i>	None	X			X	X	X	X	X	X	X	X	X
Mink <i>Mustela vison</i>	None	X			X	X	X	X	X	X	X	X	X
River Otter <i>Lontra canadensis</i>	BLM Sens.	X			X	X	X	X	X	X	X	X	X
Badger <i>Taxidea taxus</i>	None	X		X	X	X	X	X		X			X
Western Spotted Skunk <i>Spilogale gracilis</i>	None			X	X	X	X	X					
Striped Skunk <i>Mephitis mephitis</i>	None	X		X	X	X	X	X	X	X	X	X	X
Lynx <i>Lynx canadensis</i>	None	X				X				X			
Mountain Lion <i>Felis concolor</i>	None	X			X	X	X	X		X			
Bobcat <i>Felis rufus</i>	None	X		X	X	X	X	X		X			

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

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<b>Mammals (continued)</b>													
Mule Deer <i>Odocoileus hemionus</i>	None	X		X	X	X	X	X		X			
Pronghorn <i>Antilocapra americana</i>	None				X	X	X	X					
Bison <i>Bos bison</i>	None	X						X		X			
Bighorn Sheep <i>Ovis canadensis</i>	None	X			X	X	X	X		X			X
Elk <i>Cervus elaphus</i>	None	X				X	X	X		X			X
Moose <i>Alces alces</i>	None	X				X	X			X			
Mountain Goat <i>Oreamnos americanus</i>	None												X
<b>Amphibians</b>													
Tiger Salamander <i>Ambystoma tigrinum</i>	None			X		X		X	X	X	X	X	X
Great Basin Spadefoot <i>Scaphiopus intermontanus</i>	None				X	X	X	X	X	X	X	X	X
Western Toad <i>Bufo boreas</i>	None							X	X	X	X	X	X
Woodhouse's Toad <i>Bufo woodhousei</i>	None						X	X	X	X	X	X	X
Pacific Treefrog <i>Hyla regilla</i>	None				X		X	X	X	X	X	X	X
Columbian Spotted Frog <i>Rana luteiventris</i>	Fed. Cand.					X	X		X	X	X	X	X
Northern Leopard Frog <i>Rana pipiens</i>	BLM Sens.								X	X	X	X	X
Bullfrog <i>Rana catesbeiana</i>	None								X	X	X	X	X
<b>Reptiles</b>													
Great Basin Collared Lizard <i>Crotaphytus bicinctores</i>	None				X		X	X					
Desert Collared Lizard <i>Crotaphytus insularis</i>	None				X		X	X					

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Reptiles (continued)</b>													
Long-nosed Leopard Lizard <i>Gambelia wislizenii</i>	None				X			X					
Western Fence Lizard <i>Sceloporus occidentalis</i>	None				X			X					
Sagebrush Lizard <i>Sceloporus graciosus</i>	None				X		X	X					
Side-blotched Lizard <i>Uta stansburiana</i>	None				X			X					
Desert Horned Lizard <i>Phrynosoma platyrhinos</i>	None				X			X					
Short-horned Lizard <i>Phrynosoma douglassi</i>	BLM Sens.					X	X	X					
Greater Short-horned Lizard <i>Phrynosoma hernandesi</i>	None						X	X					
Western Skink <i>Eumeces skiltonianus</i>	None						X	X					
Western Whiptail <i>Cnemidophorus tigris</i>	None				X		X	X					
Rubber Boa <i>Charina bottae</i>	None					X	X						
Ringneck Snake <i>Diadophis punctatus</i>	None						X						
Racer <i>Coluber constrictor</i>	None					X	X	X					
Striped Whipsnake <i>Masticophis taeniatus</i>	None				X	X	X	X					
Great Basin Gopher Snake <i>Pituophis cantenifer</i>	None				X		X	X					
Common Kingsnake <i>Lampropeltis getulus</i>	None				X		X	X					
Sonoran Mountain Kingsnake <i>Lampropeltis pyromelana</i>	BLM Sens.						X						
Gopher Snake <i>Pituophis melanoleucus</i>	None				X		X	X					
Long-nosed Snake <i>Rhinocheilus lecontei</i>	None				X			X					

# Antelope Complex Gather Capture Plan and EA

Appendix K continued.

Common Name Species	Most Protective Federal Status	Aspen Woodland	Cliffs and Canyon	Grasslands and Meadows	Intermountain Cold Desert Scrub	Intermountain Conifer Forests and Woodlands	Lower Montane Woodlands	Sagebrush	Desert Playas and Ephemeral Pools	Intermountain Rivers and Streams	Lakes and Reservoirs	Marshes	Wet Meadows
<b>Reptiles (continued)</b>													
Common Garter Snake <i>Thamnophis sirtalis</i>	None				X			X					
Western Terrestrial Garter Snake <i>Thamnophis elegans</i>	None			X	X	X	X	X	X	X	X	X	X
Ground Snake <i>Sonora semiannulata</i>	None				X		X	X					
Night Snake <i>Hypsiglena torquata</i>	None				X		X	X					
Western Rattlesnake <i>Crotalus oreganus</i>	None						X	X					

<sup>1</sup>BLM Sens. = Nevada BLM Sensitive Species, Mig. Game = Migratory Game Bird, Fed. Cand. = Federal Candidate Species.

<sup>2</sup>State Sensitive Species



# Antelope Complex Gather Capture Plan and EA

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## Appendix L

### Observation Day Protocol and Ground Rules

**These rules were created to ensure the safety of both the humans and the animals at the gather site(s).**

A scheduled public observation day provides a more structured mechanism for interested members of the public to see the wild horse gather activities at a given site. On this day, BLM attempts to allow the public to get an overall sense of the gather process and has available staff who can answer questions that the public may have. The public rendezvous at a designated place and are escorted by BLM representatives to and from the gather site.

- The Bureau of Land Management (BLM) will schedule observation days to provide the media and public opportunities to view activities during the wild horse gather.
- To provide a safe environment for the animals, BLM staff, contractors and members of the public/media, requests will be accepted on a first come, first served basis and be limited to **10 people** per observation day. The BLM recommends all appointments be made as far in advance as possible in order to help us schedule and confirm your request, and will make every reasonable effort to accommodate the public.
- Observation days and gather operations may be suspended if bad weather conditions create unsafe flying conditions.
- The BLM will notify observers as soon as possible if an observation day is canceled due to bad weather.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, clothing and food.
- Observers are prohibited from riding in government and contractor vehicles and equipment.
- Visitors arriving at the rendezvous site without an appointment will not be allowed to participate in the observation day.
- BLM representatives will escort visitors to and from the gather and/or temporary holding facility.
- Visitors will be assigned to a BLM representative and must stay with that person at all times.
- Visitors are **NOT** permitted to walk around the gather site unaccompanied by a BLM representative.
- The BLM will clearly identify observation areas and visitors **must** stay within these designated areas.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.

## Antelope Complex Gather Capture Plan and EA

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- Visitors must direct their questions/comments to either a designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities.
- BLM may make the BLM/contractor staff available during down times for a Q&A session.
- When given the signal that the helicopter is close to the gather site bringing horses in, visitors must sit down in areas specified by BLM representatives and must not move or talk as the horses are guided into the corral.

Observers will be polite, professional and respectful to BLM managers and staff and the contractor/employees.

Visitors who do not cooperate and follow the rules will be escorted off the gather site by BLM law enforcement personnel, and will be prohibited in participating in any subsequent observation days.

### **Non-Observation day Protocol and Ground Rules**

Non-observation days are days when the public is welcome to attend a gather on public land, or on specified private lands where permission was granted. The public is responsible for their own safety and health in their travels to and from the gather site.

- BLM staff will be limited on these days to answer questions.
- The public will be expected to remain in designated observation areas.
- Visitors are **NOT** permitted to walk around the gather site unaccompanied by a BLM representative.
- The BLM will clearly identify observation areas and visitors **must** stay within these designated areas.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, clothing and food.
- When given the signal that the helicopter is close to the gather site bringing horses in, visitors must sit down in areas specified by BLM representatives and must not move or talk as the horses are guided into the corral.

Observers will be polite, professional and respectful to BLM managers and staff and the contractor/employees. Visitors who do not cooperate and follow the rules will be escorted off the gather site by BLM law enforcement personnel, and will be prohibited in participating in any subsequent observation days.

# Antelope Complex Gather Capture Plan and EA

## Appendix M

### Comments Received and Responses

#### Antelope Complex-Wild Horse Gather Plan Environmental Assessment, DOI-BLM-NV--EA

In excess of 2,800 comment letters/emails were received from individuals, organizations and agencies following the issuance of the Antelope Complex-Wild Horse Gather Plan Preliminary Environmental Assessment, DOI -BLM-NV-N020-2010-0019. The majority of these approximately 2,800 comment letters/emails received were form letters. Comments received after October 19, 2010, were not accepted. All comment letters were reviewed and considered and resulted in approximately 168 unique substantive comments. Substantive comments were utilized to finalize the EA as appropriate. BLMs responses to the comments received are identified in the table below. Comments received were organized into the following general categories:

Herd growth/animal numbers incorrect  
Appropriate management levels are too low  
Affected environment/monitoring data  
Concerns/effects/results of fertility control  
Save Americas Mustangs  
Outside of scope of analysis  
Viewpoint/matter of opinion  
Concerns/effects of use of helicopters  
Concerns/effects of Long Term Pastures  
Concern on modeling program  
Public perception regarding other uses in the Antelope Complex

No.	Commenter	Comment	BLM Response
1	Individuals	I fully support the gather of excess wild horses from these HMAs. Allowing excess wild horses on the public lands is contrary to the multiple-use concept supported by the public and is at the expense of the other users of the public lands. I encourage you to remove enough Wild horses to make the average over a ten year period equal to the average management level so the expense of gather can be kept to a minimum.	Comment noted.
2	Individuals	Round up all the feral horses.	Comment noted.
3	Jim Catlin	I support in concept the action proposed. Wild horses are, in my view, an exotic species of	Comment noted. See response to comment 1 above.

## Antelope Complex Gather Capture Plan and EA

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		wildlife. While protected, they need to be managed so that habitat impacts are mitigated	
4	Jim Catlin	Where actions are proposed inside a WSA, I recommend that no action be taken that would increase the human impact in the WSA or lead to conditions that place at risk the candidacy of this area for designation as wilderness.	Comment noted. Protection measures are implemented under the EA for WSAs.
5	Jim Catlin	The choice of Shafter Well may be a good choice even though inside a WSA. I would recommend not constructing any new permanent structures and removing temporary fencing, should that be used in this gather.	Comment noted. Protection measures are implemented under the EA for WSAs.
6	Nevada Department of Transportation	The Elko Sub-district supports the removal of excessive wild horses from the range area adjacent to NDOT controlled roadway.	Comment noted.
7	Nevada Department of Transportation (NDOT)	Over population of wild horses has negative impact on the maintenance and safety of NDOT's roadways. Lack of forage or water causes the horses to damage right-of-way fencing and sometimes they break through fencing to gain entry into the fenced R/W areas causing severe accidents. Over population of wild horses also causes them to migrate into new areas where R/Ws are not fenced to find food or water. This can cause additional accidents to occur, as there is no protection for either the horse or the driving public. This is especially concern in areas where they not expected as the public is not aware of their presence until it is too late. Accidents involving horses on rural high speed roadway is major safety concern to NDOT and should be of concern to everyone involved.	Comment noted.

## Antelope Complex Gather Capture Plan and EA

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		These accidents have much higher statistical rate of causing a fatality than commonly found wild or domestic animals on these ranges due to height, weight and the dynamics that occur when horse is hit by a standard vehicle	
8	Nevada Division of State Lands	The Nevada Division of State Lands supports this gather and the efforts to reduce HMA populations down to AML.	Comment noted.
9	Nevada State Historic Preservation Office	Supports the gather as written.	Comment noted.
10	Nevada Cattlemen's Association	Endorses the removal of wild horses to the minimum appropriate management level.	Comment noted.
11	Nevada Cattlemen's Association	The Nevada Cattlemen's Association continues to be in support of sustainable, healthy, well managed herds of Wild Horses and Burros on healthy Nevada rangelands.	Comment noted.
12	Nevada Cattlemen's Association	The association does not stand for one use over another on public lands. We believe in the multiple use concept of management.	Comment noted.
13	Nevada Cattlemen's Association	There are standards and guidelines that we work under so that utilization on the range is at an acceptable level where wildlife and other users have forage and esthetic value on the public lands. If over use by livestock occurs on public lands there are consequences to the permittee. this may include a temporary reduction in Animal Unit Months, lines, or permanent loss of the permit.	Comment noted.
14	Nevada Cattlemen's Association	Degradation to our public lands is not acceptable by any user group. Management of wildlife and domestic animals is crucial to the health of the resource. If wild horses are kept unchecked their population can grow to	Comment noted.

## Antelope Complex Gather Capture Plan and EA

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		unhealthy levels; causing not only resource damage but damage to the health of the herd. We feel that it is unacceptable for horse numbers to exceed AML.	
15	Nevada Cattlemen's Association	We support BLM's plans to gather excess horses and manage numbers of those remaining with stacked sex ratios and non-breeding herds. We encourage you to keep the Antelope Complex within appropriate management levels (AML).	Comment noted.
16	Nevada Cattlemen's Association	Gathering 1,438 excess number of horses from the Owyhee, Rock Creek, and Little Humboldt Herd Management Areas will bring horse numbers back to a level where both the resource and the animal can continue to be healthy. With concerns such as the potential impacts to Lahontan cutthroat trout habitat within the Herd Management Areas, give the BLM cause to gather some horses.	These HMAs are not the subject of this EA. Outside of the scope of the EA.
17	Nevada Cattlemen's Association	Wild Horses are on the range 12 months a year and their health can be correlated to the health of the land. To ensure a healthy herd of Wild Horses the land and water resources must be healthy too. The Nevada Cattlemen's Association encourages the Bureau of Land Management to manage the Wild horse herds of Nevada at AML. This is important not only for the resource but for overall herd health.	Comment noted.
18	Nevada Cattlemen's Association	Leaving excess wild horses on the range under the No Action Alternative would not comply with the 1971 WFRHBA or applicable regulations and Bureau policy, or with either the Wells RMP nor would it comply with the Northeastern Great	Comment Noted see 2.7 No Action Alternative



## Antelope Complex Gather Capture Plan and EA

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		Basin Resource Advisory Council (RAC) Standards and Guidelines (February 12, 1997) for Rangeland Health and Healthy Wild Horse and Burro Populations (2000). However, it is included as a baseline for comparison with the Proposed Action Alternative, as provided for in the 1969 National Environmental Policy Act (NEPA). The No Action Alternative would allow continued deterioration of rangeland resources, including vegetative, soil and riparian resources, with potentially irreversible loss of native vegetative communities.	
19	Nevada Cattlemen's Association	We do not support the No Action Alternative.	Comment noted.
20	Nevada Cattlemen's Association	We support Alternative A. We feel this alternative addresses the needs of the horses, the landscape and the multiple users of our public lands. Adjusting the sex ratio is important as it will reduce the frequency of gathers and allow the horse population growth to be slowed down. We also support removal of all horses outside the HMAs boundaries. The areas not designated as HMAs should be horse free and free of the negative impacts that horses cause. We feel all these aspects are supported by WFRHBA and backed by law.	Comment noted.
21	Nevada Cattlemen's Association	We support gathering to the lower end of AML. Wild horses reproduce at a rate of 20% a year, meaning the populations of these HMAs will double in five years. By changing the sex ratio, the rate of reproduction will be reduced and the frequency of gathers will be abridged. We also support the gathering of any	Comment noted.

## Antelope Complex Gather Capture Plan and EA

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		horses outside designated HMAs. These areas should be zeroed out to ensure the health of the land and the animals.	
22	Nevada Cattlemen's Association	Wild horses in the Antelope Complex are not substantially regulated by predators or other natural factors. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95%, and they do not self-regulate their population growth rate. (pg 15)	Comment noted.
23	Nevada Cattlemen's Association	When populations grow beyond the "thriving natural ecological balance" negative impacts to the vegetation, soil, and habitat occur. We feel that BLM has an obligation to find that balance and ensure that it is met.	Comment noted.
24	Nevada Cattlemen's Association	These HMAs occur on active livestock grazing allotments. The need for balance is critical, and with over use and over population of horses the balance of use and herbivory has not been able to occur.	See Section 3.1.7 of the E.A. Livestock Affected Environment.
25	Nevada Cattlemen's Association	We agree that wild horses need to be managed and maintained at Appropriate Management Levels. When the numbers exceed AML, degradation occurs on the landscape. We support the notion that after the gather the landscape may have the ability to rest and possibly restore the ecological condition.	Comment noted.
26	State of Nevada Department of Wildlife (NDOW)	NDOW supports the Bureau of Land Management's (BLM)'s preferred proposal (Alternative A) to bring the wild horses in the Antelope Complex back into Appropriate Management Levels (AML). Given that the wild horse numbers are currently 2.6 times greater than the upper AML and that deteriorated rangeland conditions have been documented, we worry about	Comment noted. The BLM appreciates NDOW's support for this project.

## Antelope Complex Gather Capture Plan and EA

		impacts to one of Nevada's most important mule deer winter ranges. The South Pequops and Spruce Mountain provide critical winter habitat to thousands of mule deer from Management Area 7 and 10.	
27	NDOW	NDOW supports BLM's efforts towards stabilizing population growth rates using fertility control and surgical procedures, in turn resulting in stable populations that remain within the AML.	Comment noted.
28	NDOW	The EA also states on page 9 that PZP-22 is a two year fertility control vaccine. However, lower on the page 9 there is a contradictory statement reading "the efficacy for the application of the two-year PZP vaccine based on winter applications follows: Year 1: 92%; Year 2: 84%; Year 3: 60%," which suggests that this vaccine has three year fertility effectiveness? Please explain this contradiction and provide a reference to the statistics stated on page 9.	Because the year 4 effectiveness falls to 68%, the benefits are minimal. Therefore the perspective is that the vaccine provides 2 years of effective fertility control. Refer to Turner et al. (2007) which concluded that 1) PZP acted as an effective contraceptive for 2 years post treatment; 2) some residual contraceptive effect remained in year 3; and 3) fertility returned to control levels by year 4 post treatment. <i>"Reproductive success rates in treated females remained 19.5% below rates in untreated females in 2003 (year 3) but this was not statistically significant. This absolute rate difference suggests a partial contraceptive carryover through year 3"</i> .
29	NDOW	Is-it possible to consider utilizing SpayVax as mentioned in the BLM population control document;	Spay Vac at this time is not an option for use as fertility control on wild horses.
30	NDOW	Kirkpatrick and Turner (2008) concluded from a long-term (i.e. 13 years) study at the Assateague Island National Seashore (ASIS) that mares experienced increasing body condition scores, reduced mortality, and increased longevity. As a result of reduced mortality and increased	The goals for these HMAs are to treat during the optimal time for fertility control during the late fall and winter to optimize the benefits of the treatment. Despite the apparent increase of body condition and longevity within treated populations, there are no studies available that definitively show that fertility control

## Antelope Complex Gather Capture Plan and EA

		longevity among mares, and in combination with many untreated mares remaining on the range, treatment potentially occurring every third year, and treatment potentially occurring outside the period when PZP-22 is most effective (i.e. November — February), the population will likely continue to increase.	treatment would directly result in population <i>increases</i> . Some reproduction will continue in these herds as the vaccine is not effective in some mares and there will always be mares that are not treated due to gather efficiencies that result in fewer than 100% gather. The goal of fertility control application is not to cause complete cessation of reproduction in the population or “extermination of entire herds” (Kirkpatrick et al. 2010), but is intended instead to reduce the rate of annual population growth to extend the period of time during which the population remains within AML.
31		Additionally, without an accurate census, it is unknown if a proper percent of the mares are treated in order for the PZP-22 to be effective on an entire population.	As the ELDO and EYDO has done in the past, it will continue to conduct inventories of treated HMAs to observe animal health, foal production and overall herd population growth rates. This information would be used to make determinations for future management.  See comment above.
32	NDOW	NDOW is concerned that there is 32a high potential for the herd to exceed the AML upper limit prior to the population stabilizing. If the population of each HMA has the potential for the herd to exceed the AML upper limit, why doesn't the BLM remove wild horses to the AML lower limit to provide a larger buffer against exceeding the AML upper limit?	See Section 2 of the EA. The Proposed Action and Alternatives B and C would reduce the wild horse population to the lower range of AML.
33	NDOW	NDOW requests that a formal monitoring plan be administered that specifically evaluates the effectiveness of PZP-22 as limited data currently exists on this contraceptives value to manage wild horses in a native rangeland setting. Surveys that	The ELDO and EYDO will continue to conduct aerial inventories on these HMAs as annual budget allows on an annual or biennial basis. The foal to adult ratio data collected during these inventories will be compared to pre-treatment data to

## Antelope Complex Gather Capture Plan and EA

		<p>“estimate population growth (i.e. foal to adult ratio)” are not specific enough to evaluate PZP’s effectiveness as various confounding factors (habitat and population dynamics) exist. For example, as a result of reduced mortality and increased longevity among mares following PZP treatments, the ratio of foals to adults will be skewed (Kirkpatrick and Turner 2008). If surveys are conducted that only capture “population growth (i.e. foal to adult ratio)”, how does the BLM plan to evaluate whether PZP-22 is effective as a contraceptive or if secondary or tertiary effects are the result for the response?</p>	<p>help determine degree of effectiveness of the treatment. Should NDOW have a monitoring plan that would be more effective, the BLM would welcome the assistance from NDOW to develop and sponsor a monitoring plan for this area.</p> <p>The BLM will continue to work with the USGS and other researchers in their studies of numerous wild horse herds across the country to further evaluate the effectiveness of the vaccine.</p>
34	NDOW	In summary, NDOW supports the BLM’s efforts at managing wild horses within the AML and is optimistic that our recommendations are considered.	Comment noted.
35	NDOW	We are in support of the Antelope Complex Wild Horse Gather.	Thank you for your support Comment noted.
36	Elko County Board of Commissioners / Elko County Natural Resource Management Advisory Commission (NRMAC)	The Elko County Board of Commissioners supports the proposed action of gathering wild horses as part of the Antelope HMA Wild Horse Gather.	The BLM appreciates your support for this project. Comment noted.
37	Elko County Board of Commissioners / NRMAC	Elko County’s position is that without such actions, wild horse herds will continue to increase with negative impacts to the environment and the health of the herds.	Comment noted.
38	Elko County Board of Commissioners / NRMAC	Elko County supports wise wild horse management and public education of the negative impacts of wild horse non-management activities.	Comment noted.
39	Individuals	The application of the infertility	Based on over 20 years of use and

## Antelope Complex Gather Capture Plan and EA

		<p>drug, PZP, is another matter of concern, and I do not feel that the negative effects of this have been given enough thought. We do not know the long-term effects of this drug on the mares and these precious herds are too valuable to the American Public to risk their genetic viability.</p>	<p>completed research into animal health and behavior following treatments it clearly shows that wild horses are neither injured by this vaccine, nor do aberrational behaviors occur as a consequence of its application. Oversight by The Humane Society of the United States assures that the vaccine is used only to slow reproduction and may not be used for the elimination of entire herds. PZP is designed to bring about short-term infertility and is reversible, reduces the need for gathers and preserves the original gene pool in each herd (Kirkpatrick et al. 2010). The HSUS strongly supports an increase in the use of fertility control – specifically the Porcine Zona Pellucida (PZP) immunocontraception vaccine . . . to slow population growth (HSUS, 2010).</p>
40	Individuals	<p>Mares treated for 7 consecutive years do not return to viable fertility.<sup>2’3</sup> The issue of reversible contraception is very important to be able to maintain wild equines in the United States. Long term treatment with PZP has inherent negative potential for these herds. I cannot support the proposed action as outlined on page 9-li of this environmental assessment (EA) which would keep mares vaccinated with PZP consecutively for most of their reproductive life (revaccination every 2-3 years).</p>	<p>The issue of non-reversibility of PZP effect after 7 years of continuous contraception is taken out of context of well designed management. The BLM goal is not to treat all mares for 7 years in a row. Younger previously treated mares can be left untreated for at least one cycle of gather/treat, which will allow them to produce foals in that period (i.e., her genes have not been removed from the pool). It is also unlikely that an individual mare could be treated consecutively for such a period since the percent of mares that can be captured in a given gather is below the 95% level.</p>
41	Individuals	<p>I urge the BLM to immediately place a moratorium on roundups and schedule public hearings to create a program that protects and manages horses on the range, rather than warehousing</p>	<p>See Section 1.1 Purpose and Need.</p>



## Antelope Complex Gather Capture Plan and EA

		them in government holding facilities.	
42	Individuals	The proposed roundup and removal are unnecessary and ill-timed. Conducting this roundup in January and February, as proposed, is inhumane and unnecessarily subjects horses to undue dangers and hardships that should be avoided.	See Section 3.1.1 Wild Horses Affected Environment.
43	Individuals	There are inadequate procedures in place for the safe administration of the fertility control drug to Antelope Complex mares, and adjusting the sex ratio to favor stallions is known to cause social disruption to herd dynamics.	<p>PZP fertility control vaccine has been delivered safely to wild horses for many years with no significant impact to the individual horses or applicators. See Appendix A Standard Operating Procedures for Population –level Fertility Control Treatments.</p> <p>The BLM is unaware of any conclusive research data that supports that assumption that adjusting sex ratios to favor males has a disruptive impact to herd dynamics.</p>
44	Individuals	I urge the Elko District Office to utilize its discretion, as per Interior Secretary Order No. 3270 issued March 9, 2007, establishing the agency policy to incorporate Adaptive Management into management programs, to defer the proposed roundup and to modify the Resource Management Plan (RMP) to reassess and establish adequate AMLs to accommodate the wild horses currently in the Antelope Complex.	<p>See response to comment 1 above. Refer to EA (Chapter 1).</p> <p>AMLs are not established in Resource Management Plans. Refer to Sections 3.1.1 and 3.1.7 and Appendices E and F for additional clarification about establishment of AMLs within the Antelope Complex. The pre-planning for Elko District's Land Use Plans is currently planned for 2011 with start of the RMP revision in 2012. The Final EIS and Record of Decision will not be complete until 2016-2017. Delay of a gather until that time is not consistent with the WFRHBA, PRIA or FLPMA, severe range degradation would occur in the mean time, and large numbers of excess wild horses would ultimately need to be</p>

## Antelope Complex Gather Capture Plan and EA

			removed from the range in order to achieve the AMLs or to prevent the death of individual animals under emergency conditions.
45	Individuals	The current RMP authorizes 18 to 27 times more resources to farmed animals than wild horses, thus the AMLs are artificially low, unfair, and inadequate.	Outside the scope of this analysis as these resource allocations have been determined through prior decision-making processes that are still in effect and are consistent with (and required by) BLM's multiple use mandate.. See EA, Section 1.2.
46	Individuals	<p>Lack of a complete current census; inappropriate methodology: the wild horse population estimates were based on aerial surveys conducted in 2009 and March 2010.</p> <p>To that count, BLM tacked on 20-percent to account for this year's new foals. However, foals are not supposed to be included for purposes of the AML. Thus, the EA lacks a current wild horse census, and the proposed removal is based on an inappropriately inflated estimate that is 20 percent higher than the actual count.</p>	<p>See page 11 for recent inventory</p> <p>The counts were conducted in 2009 and 2010 and are considered current as are the methods used. Both are in compliance with the new BLM IM 2010-057 Wild Horse &amp; Burro Population Inventory and Estimation. and H-4700-1 Wild Horse and Burro Handbook.</p> <p>Wild horses on public lands have an average growth rate of 18-25% with a national average of 20%</p> <p>Most of the foals during this gather will be weaned by January; therefore we are counting them towards AML for this gather.</p>
47	Individuals	Reduces herd below the unscientific and arbitrary AML:	<p>The EA has been updated to show the dates and decisions that established the AMLs.</p> <p>AMLs were established through prior separate decision-making processes and were based on analysis of available monitoring data. See EA, Sections 3.1.1 and 3.1.7 and Appendix E and F.</p>
48	Individuals	Inappropriate removal strategy: the Proposed Action's removal strategy appears to be based solely on human preferences.	The BLM feels that the proposed gather and removal strategy is the most appropriate method for this project as other methods would be more labor and time

## Antelope Complex Gather Capture Plan and EA

			consuming.
49	Individuals	Inadequate safety precautions for administering PZP: the BLM's procedures for administering the PZP drug do not provide safety precautions.	See Appendix A Standard Operating Procedures for Population –level Fertility Control Treatments.
50	Individuals	Harmful effects omitted from the EA: the harmful effects of social disruption and destruction of family bands that the proposed roundup would cause are dismissed in the EA.	See Section 3.1.1 Wild Horses Affected Environment.
51	Individuals	Does not provide for the development of water resources: due to the scarcity of water in the Antelope Complex	Outside the scope of this analysis.
52	Individuals	Ignores impact from natural predators.	Wild horses on public lands have an average growth rate of 18-25% with a national average of 20% which shows that natural controls and self regulation do not have a major impact on this growth rate.
53	Individuals	Decrease or eliminate farmed animal grazing in affected HMAs pursuant to 43 C.F.R. 4710.5(a)	The issue of authorized livestock grazing use was previously decided in the land use planning process and in a series of multiple use decisions. See also Section 2.8 Alternatives Considered But Eliminated from detailed Analysis.
54	Individuals	Designate such areas to be managed principally for wild horse herds under 43 C.F.R. 4710.3-2.	HMAs are areas designated in the Land Use Planning process for the long term management of wild horses. The Elko District administers 8 HMAs but does not administer any Congressionally designated Wild Horse or Burro Ranges, which are by definition in the Act “devoted principally but not necessarily exclusively to their welfare in keeping with the multiple-use management concept for the public land”.
55	Individuals	Offer ranches in the affected HMAs the option to retire livestock grazing allotments or convert livestock grazing	This is outside the scope of this analysis. The BLM has a multiple-use mandate to manage for all uses of the public land.

## Antelope Complex Gather Capture Plan and EA

		allotments to wild horse allotments to promote ecotourism opportunities.	Achieving and maintaining wild horse populations within established AMLs and controlling their population growth rates will enhance the public lands for the benefit of all users and resources. This in turn will increase the recreational experience in the area.
56	Individuals.	<p>Please do not do anymore roundups, as they are not needed.</p> <p>Please reduce your subsidized grazing leases</p>	<p>Comment noted. See 1.1 Purpose and Need of the E.A.</p> <p>This comment is outside the scope of this analysis. See 2.8 Alternatives Considered But Eliminated from Detailed Analysis.</p>
57	Individuals	Aren't the wild horses native wildlife? What wildlife could they be threatening?	The Congress declared horses as wild and free-roaming under the 1971 WFRHBA. Under the law, BLM is required to manage wild horses in a thriving natural ecological balance and multiple use relationship on the public lands and to remove excess immediately upon a determination that excess wild horses exist. Refer to the EA (Section 1.1 – Purpose and Need and Section 3.1.6-Wildlife).
58	Individuals	The massive removal of wild horses from the Antelope Complex and the warehousing of these horses in government holding facilities violates the intent of Congress and the will of the American people that our wild horses be managed on the range in a humane and minimally intrusive manner that preserves their wild and free-roaming behavior.	<p>The BLM has examined current information and on the basis of that information determined that excess wild horses exist and need immediate removal consistent with the WFRHBA. Refer to EA (Section 1.1 and 1.2.1).</p> <p>The BLM has also analyzed the potential impacts associated with No Action (Delay Gather/Removal). See EA, Chapter 3.</p>
59	Individuals	Implement and expand the current proposed fertility control treatments to allow more horses to remain on the range.	BLM is currently looking at aggressive fertility control within the Antelope Complex. Additionally, every effort will be made to apply fertility control to the mares within the Antelope

## Antelope Complex Gather Capture Plan and EA

			Complex based on gather efficiency. Please refer to Section 2 of the EA.
60	Individuals	Violates the 1971 Act, HMA's were to be managed for the primary benefit of wild horses, not private livestock operators.	<p>This issue is outside the scope of this analysis. Information about the Congress' intent is found in the Senate Conference Report (92-242) which accompanies the 1971 WFRHBA (Senate Bill 1116): <b>"The principal goal of this legislation is to provide for the protection of the animals from man and not the single use management of areas for the benefit of wild free-roaming horses and burros.</b> It is the intent of the committee that the wild free-roaming horses and burros be specifically incorporated as a component of the multiple-use plans governing the use of the public lands." (Senate Report No. 92-242).</p> <p>Under the 1976 Federal Land Policy and Management Act (FLPMA), BLM is required to manage public lands under the principles of multiple use and sustained yield. Managing use by cattle and sheep, together with wildlife and wild horses and burros, and a host of other uses is a key part of BLM's multiple-use management mission under FLPMA. The Elko District does not administer any Congressionally designated Wild Horse or Burro Ranges, which are "devoted principally but not necessarily exclusively to their welfare in keeping with the multiple-use management concept for the public land".</p>
61	Individuals	Range improvements and water enhancements that will benefit all animals, including wildlife and horses, living in the HMAs	This comment is outside the scope of this analysis.
62	Individuals	Surely, other alternatives such as <b>true protection in their</b>	See response to comment 60 above.

## Antelope Complex Gather Capture Plan and EA

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		<b>preserved habitat</b> (1971 WFRHB Act), safe from the invasion of drilling, mining and an ever increased cattle population <b>are not only of compelling importance</b> - but the only solution and answer after the irreparable havoc that BLM has caused for the American wild mustangs and burros. End the round ups and do your job, which your agency was assigned to do: Protect our wild horses and burros in their designated protected lands and stop the propaganda - before it's too late !!!	
63	Western Watersheds Project	Western Watersheds Project requests that Elko BLM prepare an EIS prior to conducting the Antelope Wild Horse Gather.	Outside the scope of this analysis.
64	Western Watersheds Project	We believe that the current AMLs are based on limited, out-dated information that fails to take into account the different manner of use of the landscape by horses vs. domestic cows and sheep. The AMLs are greatly biased towards ranching interests. A modern day carrying capacity and stocking analysis has not been conducted.	See response to comment 47 and 53 above.
65	Western Watersheds Project	There are also changed environmental circumstances – with Madeleine Pickens having purchased the vast Spruce Ranch and the public lands grazing permit. So there seems no urgent need to Gather horses across those holdings.	See Sections 1.1 and 2.8 of the EA.
66	Western Watersheds Project	A full range of alternatives under NEPA must be evaluated. This includes alternatives that:	NEPA directs the BLM to “Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involve unresolved conflicts concerning alternative uses of available resources....” (NEPA Handbook 1790-1 page 49). BLM believes that it has included a reasonable range of



## Antelope Complex Gather Capture Plan and EA

		<p>Maximize band integrity</p> <p>Efforts should be made to encourage natural predators – and reducing livestock conflicts will greatly aid in this effort – by reducing Wildlife Services activity</p>	<p>alternatives (CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981).</p> <p>Outside the scope of this analysis.</p> <p>The WFRHBA requires removal of excess wild horses and management for a thriving natural ecological balance.</p> <p>Natural predation is not an effective method for controlling the wild horse population in the Complex.</p>
67	Western Watersheds Project	Humane observers are not allowed to witness all parts of the operation. Any member of the public who desires to be present at any time - and agrees to not interfere with the Gather - should be allowed to be present during all phases of this activity	Some restrictions on public access or proximity to gather operations may be necessary to ensure human and animal safety Please see Section 3.1.10 of the E.A. and Appendix L.
68	Western Watersheds Project	We are concerned that pre-Gather actions may place stress on wildlife and horses. Detailed analysis of all activities over the past year that in any way moved horses, manipulated facilities, manipulated water sources, etc. must be provided and their full effects examined	Outside the scope of analysis.
69	Western Watersheds Project	All monitoring information for the past decade up to the present for cattle/sheep and for horses must be fully provided and summarized here. All Actual Use info must be provided.	Relevant monitoring data and wild horse census information is summarized in the EA. Actual use for livestock from 2002-03 to 2009-10 is summarized in Section 3.1.7.
70	Western Watersheds Project	All wild horse numbers and counts with specific geographic locations must be provided and mapped for the past 10 years for this area.	See response to Comment 69.
71	Western Watersheds Project	Please provide detailed analysis of methods used to separate horse and domestic livestock and big game use, and the locations of each and every monitoring sits, as well as detailed	See response to Comment 69.

## Antelope Complex Gather Capture Plan and EA

		discussion	
72	Western Watersheds Project	Please provide full analysis of how development of an OHV Trail/Road network here may adversely alter wildlife, and wild horse use – and may cause or exacerbate conflicts	Outside the scope of this analysis.
73	Western Watersheds Project	Please provide detailed analysis of how SWIP or other energy projects may adversely affect or intrude on both wildlife and wild horses habitats and use.	Outside the scope of this analysis.
74	Western Watersheds Project	Please provide detailed analysis of all Oil and Gas leasing and any mining, geothermal or other claims or activity (explore or development).	Outside the scope of this analysis.
75	Western Watersheds Project	We are greatly concerned about the adverse effects of the intensive disturbance during winter on wildlife, as well as on soils, watersheds and other components of the environment.	See Chapter 3 Affected Environment of the E.A.
76	Western Watersheds Project	Detailed Baseline studies must be conducted to provide current and complete information on Sage Grouse, Pygmy Rabbit, Antelope, Mule Deer, Elk, and other important, sensitive and rare species presence and use of the landscape during winter.	The Affected Environment for Wildlife is described in Section 3.1.6.
77	Western Watersheds Project	Please provide a detailed analysis of the immense Footprint of the current livestock operations here – and how seasons of use, stocking rates, high levels of use, herding activity, etc. may be adversely affecting horses and ALL wildlife species.	Livestock season of use and grazing use is outlined in Section 3.1.7.  Outside the scope of this analysis.
78	Western Watersheds Project	Please provide a detailed analysis of all livestock facilities, salting/feeding sites, sheepherder camp sites, etc. and how these may intrude on horses and wildlife and heighten conflicts.	Outside the scope of this analysis.
79	Western Watersheds Project	Please provide detailed analysis of the severity of current livestock grazing and its adverse	Grazing use by livestock is outlined in Section 3.1.7.

## Antelope Complex Gather Capture Plan and EA

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		effects. I visited the eastern edge of the Spruce area in summer – and was alarmed at the severe cattle use I observed. It seems very likely that claimed horse impacts were actually caused by current abusive grazing in many areas.	No livestock use occurred on the Spruce Allotment after June 30, 2010.
80	Western Watersheds Project	Please acknowledge that you will incorporate all information related to the Sensitive Species EIS as described above into this Antelope Gather process.	Outside the scope of this analysis. Impacts to sensitive species are addressed in Section 3.1.6.
81	Neil Walton	While the models and graphs in regards to population growth are far more detailed than the other wild horse gather EAs I have reviewed, it is troubling to see that yet again, the default number of 18-20% increase in population for wild horse herds is repeated over and over again.	Wild horses on public lands have an average growth rate of 18-25% with a national average of 20%. These growth rates are supported by wild horse census data.
82	Neil Walton	Clearly, water traps seem to be a very viable option in wild horse herd management in the Antelope Valley Complex, since they will come to a water source so easily and in such great numbers as is documented here.	See Section 2.8 Alternatives Considered But Eliminated from Detailed Analysis of the E.A.
83	Neil Walton	“Remove and Reduce Livestock from the HMA,”	See response to comment 53 above.
84	Neil Walton	Clearly, in order to determine the impact large grazers are having on an area, ALL large grazer species populations (whether wild or domestic) must be evaluated using the same methodology. This evaluation would include damage to riparian areas, creation of trails and hoof action damage to soils etc, as it appears that this damage is currently 100% attributed to wild horses in this EA.	See response to comment 45 and 79 above.

## Antelope Complex Gather Capture Plan and EA

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85	Neil Walton	On Page 30, the report describes in details how changes in the environment can impact the health of wild horse and burro herds, leading to catastrophic illness, suffering and death. In nature, it is the environment that always determines species survival.	Outside the scope of the analysis. The WFRHBA requires removal of excess wild horses and management for a thriving natural ecological balance.
86	Neil Walton	I also feel that removing wild horse and burro herds from any area prior to doing a thorough study of the environmental impact of domestic livestock grazing is not what the American taxpaying public wants or will continue to tolerate.	See response to comment 45 above.  The Final Multiple Use Decision establishing the AMLs and grazing systems and the supporting documentation (including environmental analyses) are available for public review at the Elko and Ely District Offices.
87	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	This EA fails to consider alternatives to the Proposed Action which include increasing Appropriate Management Levels for wild horses; reducing livestock grazing pursuant to BLM's clear legal authority to do so; converting livestock grazing allotments to increase forage for wild horses and allow greater population numbers; and making range improvements	See Section 2.8 Alternatives Considered But Eliminated from Detailed Analysis of the E.A. See also response to Comment 53.
88	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	Additionally, this EA fails to identify the impacts of the Proposed Action on the horses, including those who are permanently removed from the range, those who are rounded up and re-released, and those left behind on the range.	See Section 3.1.1 Wild Horses Affected Environment of the E.A.
89	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	The EA contains no discussion of the harmful effects of social disruption and destruction of family bands, or the expected deaths of horses in holding facilities due to effects of capture-related trauma and stress.	See Section 3.1.1 Wild Horses Affected Environment of the E.A.

## Antelope Complex Gather Capture Plan and EA

90	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	The Antelope Complex HMAs are on public land which was designated by congress <i>principally though not exclusively</i> for wild horses. Please explain the reason for this oversight in management.	See response to comment 60 above.
91	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	This EA catastrophically fails to provide a scientific basis or rationale for the decision to remove such a large number of horses.	AMLs were established through prior separate decision-making processes. See EA, Sections 3.1.1 and 3.1.7 and Appendix E and F.
92	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	It would make more sense to pay the permittees who have been given grazing permits within the HMA not to graze on the public lands and leave wild horses on the Antelope Complex public lands in greater numbers.	Outside the scope of this analysis and BLM lacks the legal authority to pay permittees not to graze.
93	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	Has the option of reducing livestock AUMs been given any consideration?	See response to comment 53 above.
94	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	Values of Wild Horses on Public Lands & Comparison with Damaging Livestock  We'd like to see this remedied in Wyoming and across the west.	Outside the scope of this analysis.
95	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	Until this important field work is accomplished, we do not recommend the use of PZP-22 or the one year PZP drug and we absolutely do not believe that wild horses should be rounded up in the dead-of-winter simply because the drug is more effective when given at this time of the year.	Refer to the description of the Proposed Action at Section 2.1 and Appendix B. A Veterinarian will be on site at the gather to observe and evaluate animal health, providing recommendations to the BLM gather staff and COR. Refer also to the SOPs in Appendix C. All precautions are taken to ensure

## Antelope Complex Gather Capture Plan and EA

			that wild horses are gathered safely during winter periods.
96	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	Skewing the sex ratio to control the population comes with significant social disruption to the herd and would likely result in compensatory reproduction as the herd works to re-establish a socially functional balance of males and females.	BLM specialists determined that the adjustment of the sex ratios (favoring stallions 60:40) was optimal for maintaining the herd, and therefore included the sex ratio adjustment as part of the Proposed Action. Impacts from the Proposed Action on wild horses are discussed in Section 3.1.1 of the EA.
97	Cloud Foundation, Front Range Equine Rescue, Colorado Wild Horse and Burro Coalition, and the Equine Welfare Alliance	Adaptive Management must be utilized and the public allowed to comment and to suggest solutions on actions in a holistic manner.	Refer to the Purpose and Need identified in Section 1.2, Chapter 4- Consultation and Coordination, and Appendix M of the EA. The interested public is involved through the Multiple Use Decision process as well as the Land Use Planning Process.
98	Individuals	Wild Horse Numbers could be controlled by Natural Means	Natural predation is not an effective method for controlling the wild horse population in the HMAs. See Section 3.1.1 of the EA and response to comment 66 above.
99	Individuals	The EA should provide an alternative to postpone the roundup, reduce livestock grazing, amend the RMP and increase AML and implement a reduction or ban on predator hunting or “management” on BLM-managed lands in and around the affected HMAs to explore the impact on horse population reduction.	<p>See Section 2 of the EA for Alternatives.</p> <p>The WFRHBA requires that the BLM remove excess wild horses immediately, thus adaptive management is not appropriate. Future management strategies will be identified during revision of the RMP and completion of an HMAP for these HMAs with public input. The Wells RMP cannot be modified through adaptive management. An RMP revision would be required and is currently planned for completion within the next several years. See response to 107 below.</p> <p>Livestock grazing is identified as a “principle or major use” under the multiple use mandate of the Federal Land Policy and Management Act of 1976 (Public</p>



## Antelope Complex Gather Capture Plan and EA

			<p>Law 94-579).</p> <p>Predators are managed by the State of Nevada.</p>
100	Individuals	EA at states AMLs were set in previous decisions following in-depth analysis of resource monitoring data collected over several years, but fails to disclose any of this data or where the data can be obtained.	See response to comments 69 and 86 above. The monitoring data is available at the ELDO and EYDO.
101	Individuals	The EA is incorrect in claiming the WFRHBA requires the immediate removal of horses. It first requires the BLM to determine there are excess horses and then whether action should be taken to remove the horses. This determination must be based on current information.	The BLM is required to manage for the maximum amount of wild horses that won't lead to range deterioration. See Sections 1.1, 1.2, and 1.3 of the E.A. BLM has made the determination, based on current information, that excess wild horses are present and need to be removed to ensure a thriving natural ecological balance.
102	Individuals	The following are outdated and as such, their use in the document is not in conformance with the law: tiering to the 1985 Wells RMP, land health standards, land health assessments or decisions that are 6-29 years old.	The documents listed are still the guiding documents for the district.
103	Individuals	This EA and Gather Plan fails to adequately consider realistic alternatives to the permanent removal of 1,659 horses from the range. These include options for range improvements such as reseeding, water source enhancement and repair as well as fence removal.	<p>Alternatives are addressed in Section 2 of the EA.</p> <p>Range improvements are outside the scope of this analysis.</p>
104	Individuals	Further, the 1990 the Government Accountability Office Report underscored that wild horse removals did not significantly improve range conditions. The report pointed to cattle as the culprit as they vastly outnumber horses on BLM-managed public lands. They reported that wild horse removals are not linked to range	Monitoring data specific to these HMAs indicates that the excess number of wild horses is a causal factor in not meeting rangeland health standards. See Section 3 of the EA.

## Antelope Complex Gather Capture Plan and EA

		conditions and mentioned the lack of data provided by BLM.	
105	American Wild Horse Preservation Campaign	Conducting the roundup in the middle of winter is inhumane and appears to be scheduled merely for the convenience of BLM and its contractor.	See response to comment 95.
106	American Wild Horse Preservation Campaign	The Proposed Action is faulty because it is based on incomplete census data	See response to comment 46 above.
107	American Wild Horse Preservation Campaign	The EA has also unjustifiably dismissed serious analysis of reasonable alternatives to the Proposed Action, as required by the National Environmental Policy Act (NEPA).	By law, BLM is required to manage wild horses in a thriving natural ecological balance and multiple use relationship on the public lands and to remove excess immediately upon a determination that excess wild horses exist. Refer to the EA (Section 1.1 – Purpose and Need and Chapter 2- Alternatives).
108	American Wild Horse Preservation Campaign	Finally, the EA has failed to consider the social factors that play a role in land use decisions and management policies, nor has it adequately considered the BLM's authority to modify land use decisions, such as wild horse AML's and livestock grazing	Land-use decisions are identified and evaluated through the resource management plan development process and are outside the scope of this proposed action/alternatives analysis. Any amendments to the land-use plans must follow the process set forth in the regulations, including publication of a scoping notice in the Federal Register, public meetings, and a public decision-making process. The proposed action and alternatives are in conformance with both the 1985 Wells RMP and the 2008 Ely RMP.
109	American Wild Horse Preservation Campaign	EA Omits Discussion of Adaptive Management Strategy.	Refer to the Purpose and Need identified in Section 1.1 of the EA.
110	American Wild Horse Preservation Campaign	However, the legality of long-term holding and BLM's current approach to wild horse management has been brought into question by two recent federal court decisions	IDA's lawsuit (In Defense of Animals v. Salazar, Case No. 1:09-cv-02222-PLF) challenging the legality of long-term holding was dismissed by the U.S. District Court for the District of Columbia in a Decision dated May 24, 2010.
111	American Wild Horse Preservation	The EA is devoid of scientific monitoring data, including	Monitoring data specific to the Antelope Complex indicates that

## Antelope Complex Gather Capture Plan and EA

	Campaign	<p>monitoring data that supports the claim that horses are overpopulating the range and/or causing damage for the range.</p> <p>The EA is further devoid of monitoring data that clearly separates the impacts of livestock and wild horse use.</p>	<p>the excess number of wild horses is a causal factor in not meeting rangeland health standards. See Section 3 of the EA.</p> <p>See response to comment 79.</p>
112	American Wild Horse Preservation Campaign	<p>Locations and measurements of all monitoring data, including areas where horse use specifically is monitored on a regular basis, is not provided.</p> <p>How BLM determined use by horses vs. livestock is not provided.</p>	<p>Outside of the scope of this analysis. See response to comment 69.</p> <p>See response to comment 79.</p>
113	American Wild Horse Preservation Campaign	BLM failed to consider a reasonable range of alternative actions.	Refer to the EA, Section 1.1 – Purpose and Need and Chapter 2- Alternatives.
114	American Wild Horse Preservation Campaign	The Proposed Action and alternatives provided in the EA are insufficient the BLM has failed to fulfill its mandate to manage wild horses at "minimal feasible level." Therefore the Proposed Action should be postponed until the inadequacies outlined herein are addressed.	Management actions for maintaining the AML of the wild horse herds are in compliance with Section 1333 of the WFRHBA. See Section 1 of the EA for more details about conformance with applicable regulations.
115	American Wild Horse Preservation Campaign	Further, BLM has the legal discretion to designate the Antelope Complex to be managed principally for wild horse herds under 43 C.F.R. 4710.3-2. This designation is particularly appropriate given Madeleine Pickens' proposal for the creation of a wild horse eco-sanctuary within the Antelope Complex.	See responses to 54 and 65 above.
116	American Wild Horse Preservation Campaign	The EA fails to consider an alternative to the proposed action which would include increasing AML to allow more horses to remain on the range and maintaining these population numbers with immunocontraception.	AMLs were established through prior separate decision-making processes. See EA, Sections 3.1.1 and 3.1.7 and Appendix E and F.
117	American Wild	The EA fails to adequately	See Section 3.1.1 Wild Horses

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## Antelope Complex Gather Capture Plan and EA

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			<p>Allotment Evaluations or Rangeland Health Assessments and EAs.</p> <p>These AMLs were established following the collection, analysis, and interpretation of many years of monitoring data, which included precipitation, use pattern mapping, trend, production, census/inventory, and carrying capacity analysis, and through coordination with the interested public. The monitoring methods used are well established and documented within the Technical References used by the BLM as well as other land management agencies for vegetation monitoring and assessment.</p> <p>Though it would simplify the process, the BLM cannot apply an equation of “X” number of horses per acre when establishing AML. Per the outcome of Dahl v. Clark (600 F. Supp. 585 Dist. Ct. Nev. 1984), the BLM is required to base AML and removals on “analysis and studies” and per numerous Interior Board of Land Appeals rulings a monitoring program involving studies of grazing utilization, trend in range condition, actual use and climatic factors. Through the assessment of these areas, Rangeland Health Assessments have been completed which have found that not all Standards for Rangeland Health are being met.</p> <p>An AML range was established for the HMAs within the Complex, where the upper number represents the maximum population for which thriving natural ecological balance would be maintained. The lower range represents the number of animals</p>
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## Antelope Complex Gather Capture Plan and EA

		<p>to remain in the Complex following a wild horse gather in order to allow for a four year gather cycle and prevent the population from exceeding the established AML between gathers. <i>“We interpret the term AML...to mean that “optimum number” of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range”</i> (109 IBLA 119 API 1989). Monitoring since establishment of the AMLs indicates that these AMLs continue to be valid and no data exists to indicate that increases to the AMLs are required at this time.</p> <p><input type="checkbox"/> Alleged range damage is caused by wild horses as opposed to the larger numbers of livestock grazing in the area.</p> <p><input type="checkbox"/> There is an appropriate and fair distribution of resources between livestock, wild horses and other wildlife species in these federally-designated HMAs.</p> <p><input type="checkbox"/> The removal of horses is necessary and goals cannot be accomplished through alternatives for on-the-range management of wild horses – measures which the Wells Field and Elko District Offices have not implemented.</p>	<p>Monitoring data specific to the Antelope Complex indicates that the excess number of wild horses is a causal factor in not meeting rangeland health standards. See Section 1.2.4 of the EA.</p> <p>See response to comment 47 above.</p> <p>AMLs were established through prior separate decision-making processes. See EA, Section 3.1.1 and 3.1.7 and Appendix E and F.</p>
122	Individuals	Requested that the roundup of horses from the Antelope Complex be canceled/postponed.	Comment noted.
123	Individuals	The EA fails to adequately evaluate the impacts to the horses of helicopter stampede	See Section 4.1 of this E.A regarding the use of helicopters.



## Antelope Complex Gather Capture Plan and EA

		<p>and permanent warehousing in BLM holding pens and pastures.</p> <p>A recent report by the American Wild Horse Preservation Campaign on the deaths of wild horses as a result of the roundup in the Calico Mountains Complex, found a vast majority of those fatalities were related to the stress and trauma from capture, loss of freedom and the destruction of wild horse family bands.</p> <p>The report included the opinion of Dr. Bruce Nock, Associate Professor at the Washington University School of Medicine and expert on the physiological effects of stress on animals that the capture and removal of wild horses “is extremely detrimental to their long-term health and soundness.”</p>	<p>The EA adequately addresses the potentials impacts related to the gather operations as well as the maintenance and care of any excess animals. Gather operations adhere to Gather SOPs which further assures the animals welfare. The referenced Calico Mountains Complex gather involved an emergency situation that arose when wild horses in portions of the Owyhee HMA became dehydrated due to a lack of water on the public rangelands.</p> <p>Impacts of the gather on the wild horses is discussed in Section 3.1.1 of the EA.</p>
124	Save Americas Mustangs/ Individuals	Saving America’s Mustangs (SAM) continues to oppose all wild horse gathers for the reasons outlined in our response to the Secretary’s solicitation of the new plan.	Comment noted
125	Save Americas Mustangs/ Individuals	The AML should be examined by an outside and independent agency in regards to the issue of genetic sustainability within wild horses and assessed by independent equine specialists.	<p>Outside the scope of this analysis.</p> <p>AMLs were established through prior separate decision-making processes. See EA, Section 3.1.1 and Appendices E and F.</p>
126	Save Americas Mustangs/ Individuals	<p>They need to address the loss of over 20 million acres originally designated for wild horses, and</p> <p>determine which approach is most valid and applicable to counting wild horses and burros with a methodological census.</p> <p>SAM will continue to oppose wild horse gathers except in real emergency situations.</p>	<p>This comment is outside the scope of the analysis.</p> <p>See response to 46 above.</p> <p>Comment noted.</p>
127	Save Americas	The gather being proposed for	See Section 2.8 of the EA.

## Antelope Complex Gather Capture Plan and EA

	Mustangs/ Individuals	the Antelope Complex should be cancelled and rescheduled for entirely different reasons. SAM is in the process of working with the BLM to establish a wild horse eco-sanctuary at the Spruce Ranch in Elko County, Nevada. Hundreds of the wild horses within the boundaries of the Antelope Complex live and roam within the boundaries of the Spruce Ranch. In fact, one of the HMAs is nearly all within the Spruce Ranch property. When the sanctuary is established, SAM will be able to take upwards of 1000 wild horses from the Antelope Complex. Why would we gather the horses now, ship them to a short term holding facility and pay an average of \$5.75 per day per horse, and then pay the transportation costs to ship horses back to the Spruce Ranch sanctuary?	The base property for the Spruce Allotment is approximately 14,000 <b>unfenced acres</b> however only 12,000 acres are contiguous, the remainder of the base property is small unfenced scattered parcels and is surrounded by public lands in the Spruce Allotment. Mrs. Pickens is not the only landowner in the Spruce Allotment.
128	Save Americas Mustangs/ Individuals	SAM asks the BLM to cancel the gather scheduled for the Antelope Complex and allow us to work with them to keep the horses in the area. This will also be a substantial savings to American taxpayers if you accept this plan.	See response to comment 127.
129	Marybeth Devlin	Applying birth control to the mares and releasing more males than females would further crush the remnant of wild horses that BLM would allow to stay.	Based on anticipated gather efficiency of about 80%, horses will not be gathered and thus not treated with Fertility Control so they will not be impacted and normal reproduction will occur. 400+ animals even with fertility control implemented will continue to reproduce and continue the existence of this herd into the future.
130	Marybeth Devlin	It is difficult to accurately count animals by means of a flyover.	While BLM will admit that 100% accurate counts are nearly impossible, the same can be said about all wildlife species. BLM is using

## Antelope Complex Gather Capture Plan and EA

			scientifically accepted inventory methods, both old direct count and new double count. You can address flight height, patterns, inventory breakoffs for multi day flights, etc.
131	Marybeth Devlin	BLM apparently has known about these "outsiders" for some time yet has done nothing. Why has BLM been negligent? Why was no effort made to shoo the horses back into the HMAs?	BLM, because of other management needs, cannot continuously address non-HMA animals but make attempts to deal with these animals with the next gather operations when it is more logistically appropriate. We will take action when the non-HMA animals are creating a nuisance on private lands, impacting habitat, or creating safety problems. Hazing horses that have taken up residency outside HMA boundaries will not permanently keep those horses within the HMAs, as the hazed horses return to their "home range" outside the HMA boundaries shortly after the hazing so it is not effective. Majority of movement out of an HMA is space and pressure related so the vacuum idea only may be supportable because of too many animals in the HMA already and limited resources.
132	Marybeth Devlin	The EA does not disclose the identity of the aircraft contractor used for the census and the one to be used for the gather. If the same contractor is used for both the census and the roundup, a concern is raised regarding an apparent conflict of interest. Such a contractor would be motivated to find a population surplus so that there would then be a need for a roundup, thereby increasing revenues by providing two different billable services.	Outside scope of project. A national Aviation contract is used for flight inventory of wild horses. This contract is a different contract than the wild horse gather contract. When counting wild horses it is the responsibility of the wild horse specialist and other members of the flight to count the horses using the chosen technique not the aviation pilot.
133	Marybeth Devlin	BLM's use of helicopters to chase the horses is inhumane and outdated. The horses are terrified by the noise and commotion	This does not accurately portray an actual helicopter gather operations. See Section 4.1 of this E.A.

## Antelope Complex Gather Capture Plan and EA

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		involved. They stampede, injure themselves, and become separated from their babies and bandmates. Many die from stress, even more are euthanized. BLM is stuck in the 70's, which is when they started using this cruel but "practical" approach. Per standard operating procedures, a veterinarian may be present if large numbers of horses are deemed in need of euthanasia. But otherwise contractor staff may be required to put down horses and dispose of their carcasses.	
134	Marybeth Devlin	BLM restricts access to its roundups by allowing just a limited number of witnesses (by reservation only) who are kept at a distance and permitted to watch only on designated "Public Observation Days."	Some restrictions on public access or proximity to gather operations may be necessary to ensure human and animal safety Please see Section 3.1.10 of the E.A. and Appendix L.
135	Marybeth Devlin	BLM appears to have misinterpreted the rule to mean that it is required to lower the herd size to the max, meaning to the low end of the AML. But such an interpretation means managing at the maximum feasible level -- in other words, too much. For the Antelope Complex herd, there is no justification to reduce the herd at all at this time because the AML is not exceeded. Reducing it anyway and to a level well below the low end of the AML is excessive and contrary to the Law.	The current population is significantly in excess of the high range of AML. BLM cannot maintain the HMA and population objectives by just gathering to high range of AML because this is the max number to manage for and hopefully attain TNEB. One weaned foal crop later and the Complex will have exceeded the AML.
136	Marybeth Devlin	Removal Strategy Well-Intentioned, but Leads to Extinction	Experience has also shown that despite lower numbers after a gather, these populations continue to thrive and increase. There is no evidence to suggest that these herds will go extinct.
137	Marybeth Devlin	PZP Treatment Can Lead to Sterilization	The vaccine has been studied for more than 30 years, and its effects are well known. In deer and wild horses, the best studied species,

## Antelope Complex Gather Capture Plan and EA

			<p>the contraceptive effects of PZP are reversible even after several consecutive years of treatment (in horses, up to at least five years). The side effects of PZP are very limited – and not all of them bad. PZP does not extend breeding cycles in wild horses (HSUS 2009)</p>
138	Marybeth Devlin	<p><b>PZP Disrupts Wild Horses' Social Dynamics</b></p> <p>The PZP drug does not prevent ovulation and does not change mare behavior toward stallions. This is not good. It results in repeated, stressful, futile breedings of the mares and ongoing battles among stallions. Out-of-season pregnancies and births can occur due to the wearing off of the drug at inopportune times. Foals born at the wrong time of year may not survive, and the mares' health may be compromised as well.</p> <p>Finally, there are reports of mares treated with PZP becoming masculinized for reasons unknown. This is another cause for extreme caution in using the drug and for sponsoring research to develop a better one.</p> <p>Finally, per other EAs that discuss escapees of gathers, those horses that evade capture are likely to be predominantly males, not mares. Thus, there will likely be a sex ratio imbalance even greater than the one intentionally created, and the fertility control measures will be</p>	<p>After 20 years of treating the ASIS mares, there is still no evidence of altering behaviors. Powell (1999), which reports on a study done by researchers from the National Zoological Park/Smithsonian. They found no behavioral effects, at that time, after almost eight (8) years of PZP treatment. The same results were reported in several of the Assateague Island papers, including (1) Kirkpatrick 1995, and (2) Kirkpatrick et al. 1995. Also, other studies (Fayrer-Hosken et al. 2000; Delsink et al. 2002) showed a lack of behavioral effects of this same vaccine on free-roaming African elephants, which have an even more complex social order than wild horses.</p> <p>Casual observation of wild horses proves nothing. For example, casual observation has reported that Pryor horses travel less than ASIS horses, but that has no scientific significance.</p> <p>Effects of alternatives are analyzed in Section 3.1.1 Wild Horses.</p>

## Antelope Complex Gather Capture Plan and EA

		<p>applied to a greater percentage of mares than theorized in the EA. With the population skewed to favor males, more competition among stallions is likely along with more sexual harassment of the mares. A better fertility drug needs to be developed -- one that would suppress ovulation temporarily, eliminate the associated behavioral manifestations, and thus avoid disruption to horse band behavior.</p>	<p>Outside of the scope of this EA.</p>
139	Marybeth Devlin	<p>BLM performed simulation trials using a population modeling software program. However, this tool is only as good as the data plugged into it, and there is a troubling lack of data for the herd in question.</p> <p>To run the program, the following data must be supplied: Initial age/sex distribution -- a "snapshot" cannot be used -- must track known individuals over time.</p> <p>Annual survival probabilities for each age/sex class. This requirement is fundamental.</p> <p>Foaling rates.</p> <p>This entire methodology is unacceptable and must not be trusted.</p>	<p>The WinEquus population model is a tool to assist wild horse and burro specialists evaluate various management plans and display the possible outcomes for management of wild horses. That was the purpose for the use of the model to display the relative outcomes for the proposed management alternatives for the Antelope Complex.</p>
140	Marybeth Devlin	<p>Roundups Spread Weeds, Raise Fire Risk</p>	<p>See Section 2.4 of the EA.</p>
141	Marybeth Devlin	<p>BLM intends to hold the roundup on private property, which surely has weeds too.</p>	<p>The antelope gather will primarily be using public land for the Antelope Complex gather.</p>
142	Marybeth Devlin	<p>Fences Block Wild Horse Migration Routes.</p> <p>The Antelope Valley HMA is now divided into three segments by fences erected along Highway 93 and its Alternate by the State of Nevada. As a result, the wild horse migration routes are</p>	<p>Outside the scope of this analysis.</p> <p>Highway ROW's were fenced for public safety.</p>



## Antelope Complex Gather Capture Plan and EA

		<p>blocked.</p> <p>The obvious remedy is an overpass-underpass that the horses, cattle, and wildlife could use to cross.</p>	Outside the scope of this analysis.
143	Marybeth Devlin	Riparian Areas -- Protect Them by Developing Alternative Water Sources	Outside the scope of this analysis. BLM, under normal situations, cannot develop water (wells, etc) for wild horses as we cannot get authorization from the State Water Engineer.
144	Marybeth Devlin	Rain and snow catchment devices, commonly referred to as "guzzlers," should be strategically installed throughout the Antelope Complex. To date, BLM has put in just one. Guzzlers capture, conserve, and release water, much like cisterns.	Guzzlers require extensive maintenance to keep them functioning properly and have to be placed in areas that receive adequate moisture. Being the driest State in Union, guzzlers would only be able to supply a small portion of water needs.
145	Marybeth Devlin	The EA discloses that active livestock AUMs are 18 times the number of allocated wild horse AUMs to which BLM proposes to reduce the herd. Further, those livestock AUMs are currently under-utilized. The latest data show 57,318 unused cattle AUMs out of the 93,982 in active status. Thus, another 4,777 wild horses could be accommodated without reducing the current level of livestock usage: 36,664 AUMs. The herd could grow to a realistic AML of 5,204 to 5,565 wild horses. There would be no need for gathers and removals for some time to come. Immediate savings of tax dollars would be realized by not conducting a roundup, and ongoing savings would be achieved by not placing any more horses into long-term holding.	See response to 53 above.
146	Marybeth Devlin	Equine digestive waste disperses the seeds of the grasses on which the horses feed, thereby replenishing desirable forage as they roam	No documentation to support this assumption is available through the existing body of research.

## Antelope Complex Gather Capture Plan and EA

147	Marybeth Devlin	BLM restricts access to its roundups by allowing just a limited number of witnesses (by reservation only) who are kept at a distance and permitted to watch only on designated "Public Observation Days.	Some restrictions on public access or proximity to gather operations may be necessary to ensure human and animal safety Please see Section 3.1.10 of the E.A. and Appendix L.
148	Marybeth Devlin	Apparently the 1.3 million-acre Antelope Complex is not big enough for BLM to conduct the gather on public land.	The antelope gather will primarily be using public land for the Antelope Complex gather.
149	Marybeth Devlin	Gentle methods, such as water-bait trapping are ideal, especially considering the drought conditions that BLM reports in the Complex.	This Alternative would not be effective on a large scale. See Section 2.8 Alternatives Considered But Eliminated from Detailed Analysis of the E.A.
150	Marybeth Devlin	The EA does not support the proposed wild horse gather in the Antelope Complex. Until proper scientific studies are conducted and equitable resource management plans are formulated, I support what BLM improperly refers to as the No Action Alternative -- defer gather -- at this time.	The determination of excess wild horses was made in paragraph one of Chapter 1 based on the available inventory, climate and monitoring data for these Antelope Complex. The Purpose and Need for Action was further identified in Section 1.1. The Proposed Action is consistent with the WFRHBA and Code of Federal Regulations. The EA analyzed the potential direct, indirect and cumulative impacts that could result with the completion of the proposed gather and removal of excess wild horses.
151	Marybeth Devlin	BLM needs to examine its methods and implement corrective action to establish a fair distribution of AUMs and a sound, proactive system for managing wild horses on the range.	See response to comment 145 above.
152	Marybeth Devlin	The use of the PZP vaccine must be suspended until a full investigation is conducted on the reasons for the severe decline in fertility affecting the sister Clan Alpine herd.	See response to comment 39 above.
153	Kathy Gregg	The proposed roundup and removal are unnecessary and it is in violation of the BLM	See Section 3.1.1 of the EA. The BLM is in compliance with IM No 2009-062. .

## Antelope Complex Gather Capture Plan and EA

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		<p>Instruction Memorandum No. 2009-062 which states:  “Background: Most wild horse herds that have been sampled exhibit moderate levels of genetic heterozygosity. Based on this analysis, approximately 12.5% of the herds tested have heterozygosity levels ... below the assumed critical level of .310. Approximately 15% of the herds tested are within just 2% heterozygosity (.330) of the critical level. A population that is maintained at less than 100-120 adult animals may begin to lose variation fairly quickly. The herds that are just above the critical threshold level could drop very quickly.”</p> <p><a href="http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-062.html">http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-062.html</a></p>	
154	Kathy Gregg	The Bureau must endeavor to make every effort not to allow livestock populations to degrade wilderness values, or vegetative cover as it existed on the date of the passage of FLPMA.	Comment noted and this is BLM’s policy as stated in the Interim Management Policy for Lands Under Wilderness Review.
155	Kathy Gregg	<p>Removal of excess livestock would result in an increase in forage availability and quality, reducing competition between livestock and wild horses for available forage and water resources.</p> <p>Removal of excess livestock would restore a thriving ecological balance and prevent degradation of rangeland resources resulting from an overpopulation of livestock.</p>	See response to comment 53 above.
156	Kathy Gregg	I urge the Elko District Office to utilize its discretion, as per Interior Secretary Order No. 3270 issued March 9, 2007, establishing the agency policy to	See response to comments 1 and 44 above.

## Antelope Complex Gather Capture Plan and EA

		incorporate Adaptive Management into management programs, to defer the proposed roundup and to modify the Resource Management Plan (RMP) to reassess and establish adequate AUM's to accommodate the wild horses currently in the Antelope Complex. The Proposed Action should be deferred while such a process is undertaken.	
157	Kathy Gregg	The Elko District Office must defer the proposed gather. A roundup is unnecessary at this time. There are no excess wild horses/burros in the Antelope complex. In addition, management on the range should be utilized to address the horses outside an HMA.	Comment noted. See response to comment 58 above.
158	Christine DeCarlo	Porcine Zona Pellucida (PZP) contraception is not completely reversible in mares depending on the length of use. Contraception can only be reversed when the antibody titer decreases to 50-60% of the positive reference sera. <sup>7</sup> Mares treated for 7 consecutive years do not return to viable Fertility <sup>2,3</sup> . The issue of reversible contraception is very important to be able to maintain wild equines in the United States. Long term treatment with PZP has inherent negative potential for these herds. I can not support the proposed action as outlined on page 9-li of this environmental assessment (EA) which would keep mares vaccinated with PZP consecutively for most of their reproductive life (revaccination every 2-3 years). This plan would insure that the mares taken out of the herd, administered PZP, and returned would never reproduce. Since the BA plan would capture 85%-	<p>In any gather there is a percentage of mares that will not be caught and either they never get treated or their treatment wears off by the next potential chance to be treated. In most likelihood, not every mare treated one time will be caught next time so repeated/consecutive treatments will not be the standard. BLM can adjust the treatment strategy with subsequent treatments by not retreating some of the mares to avoid a series of consecutive treatments if determined to be necessary through evaluation of gather and post gather population data and herd management strategies outlined in a Herd Management Plan.</p> <p>Per Dr. John Turner, wild horse fertility control researcher via e-mail October 2010: <i>1) The issue of non-reversibility of PZP effect after 7 years of continuous contraception is taken out of the context of well designed management. The BLM goal is</i></p>

## Antelope Complex Gather Capture Plan and EA

		<p>90% of the herd, and vaccinate all mares returned to the Antelope Complex, this would be catastrophic to sustaining the herd but also to genetic variation of the species. There is absolutely no selection plan at all. Alternative A mandates that of the animals released postgather, fertility control (PZP) would be applied to all the released mares (ages 19 and younger). Ironically, the one group not scheduled to receive the vaccine (animals 20 years and older) is the one group of mares that could benefit from it in terms of both body condition and longevity<sup>4</sup>. There is a lag time for returning to fertility after PZP for consecutive use in mares of less than the aforementioned 7 years. Even 3 consecutive years of P72 treatment can mean a delay in pregnancy of 1-8 years (mean of 3.7 years)<sup>2,3</sup>. In domestic mares, it took 8.5 months to reverse effects of PZP after only one year of treatment<sup>5</sup>. Because equines are a seasonally polyestrous species with long days (May, June, July in North America) being their natural breeding season, this equates to a minimum of one year to a maximum of 8 years without new foals for the mares taken off PZP. However, the longer mares are kept barren the greater the risk of being permanently incapable of reproducing. This, combined with the plan to vaccinate all sexually mature mares, 19 years of age and younger, will contribute to an aging barren mare population. The anatomy of the female reproductive organs is strongly influenced by</p>	<p><i>not to treat all mares for 7 years in a row. Younger previously treated mares can be left untreated for at least one cycle of gather/treat, which will allow them to produce foals in that period (i.e., her genes have not been removed from the pool). Thereafter, if BLM wishes to keep a given mare infertile continuously, it is not really a problem, but it is unlikely that this can occur, since the percent of mares that can be captured in a given gather is way below the 95% level. (Dr. De Carlo appears to assume that the Assateague model of keeping 95% of mares infertile year after year is applicable to Western herds).</i></p> <p><i>2) The data to date for Western herds show that 1) the capture rate (therefore the treatment rate) is in the 60-80% range and 2) the efficacy of the 2-yr vax, even ideally, leaves 15-25% of mares fertile in year 2 and &gt;30% fertile in year 3. Thus, Dr. DeCarlo's 'catastrophic' impact of fertility control in any herd is overstated. The likelihood is that GROWTH rate can not even be zeroed, let alone a reduction in population, at least until treatment efficacy and level of access to mares increases.</i></p> <p><i>3) Note that the Assateague data proved that it took 16 years of intensive treatment (95%) to reduce that population by 34%. Theoretically, with persistent pursuit of this program on Assateague, it will take another 30 years to reach the threat of herd extinction.</i></p> <p><i>4) The issues of reproductive problems of older mares are</i></p>
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## Antelope Complex Gather Capture Plan and EA

		<p>age.6 Young, healthy mares (3-12 years) ensure the highest per—cycle pregnancy rate and the lowest pregnancy loss rate,<sup>74</sup> Estimates of the embryonic loss rate between fertilization and day 10 post fertilization is 9% for young mares compared to 60 to 70% for aged mares.<sup>9,12,14</sup> Older maiden mares (&gt; 12 years) are susceptible to post-breeding endometritis and are therefore difficult to get pregnant.<sup>5</sup> Endometrial glandular degenerative changes and stromal fibrosis (endometriosis) are an inevitable consequence of aging.<sup>16</sup> Often, an older maiden mare has an abnormally tight cervix, which fails to relax properly during estrus so that fluid is unable to drain and accumulates in the uterine lumen.<sup>17</sup> Once the mare is bred, the fluid accumulation is aggravated because of poor lymphatic drainage and impaired myometrial contraction compounded by the tight cervix.<sup>15</sup></p> <p>1. Liu, I.K., Turner, J.W., Jr., Van Leeuwen, E.M., Flanagan, D.R., Hedrick, J.L., Murata, K., Lane, V.M. &amp; Morales-Levy, M.P. (2005) Persistence of anti-zonae pellucidae antibodies following a single inoculation of porcine zonae pellucidae in the domestic equine. <i>Reproduction</i> 129, 181-190.</p> <p>2. Kirkpatrick, J.F. &amp; Turner, A. (2002) Reversibility of action and safety during pregnancy of immunization against porcine zona pellucida in wild mares (<i>Equus caballus</i>). <i>Reprod Suppl</i> 60, 197-202.</p> <p>3. Kirkpatrick, J.F., Rowan, A., Lamberski, N., Wallace, R.,</p>	<p><i>essentially correct, but these points are not relevant to a proper management plan. This is because older mares that have contributed to the gene pool several times should not be reproducing anyway. The key is to limit reproduction in younger mares so that they have only one or 2 foals in their first decade and thereafter experience contraception for as long as the BLM needs to limit population growth.</i></p>
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## Antelope Complex Gather Capture Plan and EA

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		<p>Frank, K. &amp; Lyda, R. (2009) The practical side of immunocontraception: zona proteins and wildlife. <i>J Reprod Immunol</i> 83, 151-157.</p> <p>4. Liu, I.K., Bernoco, M. &amp; Feldman, M. (1989) Contraception in mares heteroimmunized with pig zona pellucidae. <i>J Reprod Fertil</i> 85, 19-29.</p> <p>5. Dyce, K.M., Sack, W.O. &amp; Wensing, C.J.G. (1987) <i>Textbook of Veterinary Anatomy</i>. (W. B. Saunders Company, Philadelphia, PA).</p> <p>6. Hearn, F.P.D. (2000) Reproductive Efficiency, in <i>Equine Breeding Management and Artificial Insemination</i>, Edn. 1st. (ed. Samper, J.C.) 267-281 (W. B. Saunders Company, Philadelphia, PA).</p> <p>7. Ginther, O.J. (1992) <i>Reproductive Biology of the Mare</i>, Edn. Second. (Equiservices, Cross Plains, WI).</p> <p>8. Ball, B.A., Little, T.V., Weber, J.A. &amp; Woods, G.L. (1989) Survival of day-4 embryos from young, normal mares and aged, subfertile mares after transfer to normal recipient mares. <i>J Reprod Fertil</i> 85, 187-194.</p> <p>9. Waelchli, R.O. (1990) Endometrial biopsy in mares under nonuniform breeding management conditions: Prognostic value and relationship with age. <i>Can. Vet. J.</i> 31, 379-384.</p> <p>10. Evans, M.J., Hamer, J.M., Gason, L.M. &amp; Irvine, C.H. (1987) Factors affecting uterine clearance of inoculated materials in mares. <i>J Reprod Fertil Suppl</i> 35, 327-334.</p> <p>11. Ball, B.A. (1988)</p>	
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## Antelope Complex Gather Capture Plan and EA

		<p>Embryonic loss in mares. Incidence, possible causes, and diagnostic considerations. <i>Vet. Clin. North Am. Equine Pract.</i> 4, 263-290.</p> <p>12. Ball, B.A. (2000) Reduced Reproductive Efficiency in the Aged Mare: Role of Early Embryonic Loss, in <i>Recent Advances in Equine Reproduction</i>. (ed. Ball, B.A.) Document No. A0201.0300 (International Veterinary Information Service, Ithaca, NY).</p> <p>13. Brinsko, S.P., Ball, B.A., Miller, P.G., Thomas, P.G. &amp; Ellington, J.E. (1994) In vitro development of day 2 embryos obtained from young, fertile mares and aged, subfertile mares. <i>J Reprod Fertil</i> 102, 371-378.</p> <p>14. Pycock, J.F. (2000) Breeding Management of the Problem Mare, in <i>Equine Breeding Management and Artificial Insemination</i>, Edn. 1st. (ed. Samper, J.C.) 195-228 (W. B. Saunders Company, Philadelphia, PA).</p> <p>15. Ricketts, S.W. &amp; Alonzo, S. (1991) The effect of age and parity on the development of chronic endometrial disease. <i>Equine Vet. J.</i> 23, 189.</p> <p>16. Pycock, J.F. (1993) Cervical function and uterine fluid accumulation in mares. <i>Equine Vet J Suppl</i> 25, 191.</p>	
159	Individuals	It is the will of the American people to preserve America's wild horses and burros and assure they are managed on their range in a humane and minimally-intrusive manner that preserves their wild and free-roaming behavior.	Comment noted
160	Individuals	The horses live in areas where little else thrives. They are not	The public lands associated with HMAs provide habitat to

## Antelope Complex Gather Capture Plan and EA

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		bothering anyone by staying in the few areas we have left them!	numerous native wildlife species which is being impacted by excessive wild horse populations. Proper wild horse population management is needed to assure a thriving natural ecological balance. Refer to the Purpose and Need in Section 1.1, Section 3.1.6-Wildlife, and 3.1.7-Livestock of the EA.
161	Individuals	You've illegally sold off much of their land to developers to trash for drilling, houses, etc.	This comment is outside of the scope of the analysis.
162	Individuals	Helicopter gathers in late winter and spring are not safe. Conducting this roundup in December is inhumane and unnecessarily subjects horses to undue dangers and hardships. Mares due to foal or those with tiny foals cannot be stressed with the long runs inherent in helicopter roundups. We saw what happened just recently in Calico and Tuscarora.	Refer to the description of the Proposed Action at Section 2.1 and Section 3.1.1 Wild Horses Affected Environment. A Veterinarian will be on site at the gather to observe and evaluate animal health, providing recommendations to the BLM gather staff and COR. Wild horses are allowed to travel at their own pace for most of the distance to the gather corrals. Refer also to the SOPs in Appendix C. All precautions are taken to ensure that wild horses are gathered safely. Gathers are not conducted from March 1 through June 30, which represents the six weeks prior to and six weeks after the peak of foaling . Experience gained through many years of gathers has shown that wild horses do well during winter gathers as they are not subject to heat related issues as would be during the summer.
163	Individuals	Please consider other alternatives - such as water traps or horseback roundups during cooler weather, only if absolutely necessary.	See Section 2.8 of the EA.
164	Individuals	The ranchers should be paying for the grazing lands they get, and the money should be used to create sanctuaries, in the western states, expressly for the horses!	This comment is outside of the scope of the analysis.
165	Individuals	Consider improvements to the	This comment is outside of the

## Antelope Complex Gather Capture Plan and EA

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		land which would enable the horses to stay, at a long-term cost to the public of far less than the current unsustainable "holding tank" system.	scope of the analysis. Even significant improvements to the amount of forage and water produced in these areas would not preclude the BLM from properly managing these herds and maintaining populations at proper levels through removals and population control such as fertility control.
166	Individuals	The EA does not fully explore/completely omits options/more humane and less intrusive options to mitigate the need for the proposed action. Alternatives to the helicopter roundup should be considered and reviewed in the EA to mitigate the helicopter stampede.	<p>The previous EAs completed for these areas (identified in Section 1.3) explored the options of gathering to the upper end of AML, gather using bait or water trapping, relocation of removed horses to other HMAs, the use of fertility control only to control the population, combining the use of helicopter with bait and/or water trapping, and removal of livestock instead of wild horses. In addition, the current EA explored alternative capture techniques such as net gunning, chemical immobilization, and wranglers on horseback. No other legitimate or reasonable alternatives were brought forward during the comment period.</p> <p>Prior to the passage of the 1971 WFRHBA, mustangers used fixed wing aircraft and motorized vehicles to roundup wild horses and burros with none of the controls we have today. Since the passage of the 1971 Act, all capture and handling activities are conducted in accordance with established Standard Operating Procedures (SOPs). The BLM personnel and APHIS Veterinarian are on site throughout the capture operation to assure humane treatment of the animals.</p> <p>The use of helicopters and motorized vehicles has proven to</p>

## Antelope Complex Gather Capture Plan and EA

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			<p>be a safe, effective and practical means for the gather and removal of excess wild horses and burros from the range. This is demonstrated by the capture of more than 26,000 excess animals over the past 5 years in Nevada alone, with a mortality rate of about one-half of one percent (.5%) which is very low when handling wild animals. Another 0.6% of the captured animals were humanely euthanized due to pre-existing conditions (as an act of mercy and in accordance with the BLM's euthanasia policy).</p> <p>BLM policy prohibits the gathering of wild horses with a helicopter, (unless under emergency conditions), during the period of March 1 to June 30 which includes and covers the six weeks that precede and follow the <u>peak</u> of foaling period (mid-April to mid-May).</p>
167	Individuals	There is no science that I have seen behind these gathers – perhaps you could send me a copy of the Environmental Assessment that the BLM conducted to come to the conclusion that there are too many horses in the area.	The EA can be found at: <a href="http://www.blm.gov/nv/st/en/o/elko_field_office.html">http://www.blm.gov/nv/st/en/o/elko_field_office.html</a>
168	Individuals	You are operating an illegal operation, and each time that you arrogantly pursue these gathers in the face of public opposition and in the face of a scientific study being done to determine if your “assessments” the BLM reinforces that perception	The proposed gather is necessary to be in compliance with the WFRHBA.
169	Individuals	The survival of wild horses on their native lands must take precedence over cattle grazing	See response to comments 45 and 53 above.
170	Individuals	Opposed to the gather. Opposed to removal of 1,659 wild horses. Stop the gather. The gather is unnecessary. The gather is a waste of tax payer money.	Comment noted

## Antelope Complex Gather Capture Plan and EA

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171	Individuals	<ul style="list-style-type: none"> <li>• HMA's areas ARE to be <b>primarily for wild horses</b>-not cattle.</li> <li>• Designate such areas to be managed principally for wild horse herds under 43 C.F.R. 4710.3-2.</li> </ul> <p>With the enactment of the Wild Free-Roaming Horse and Burro Act Congress specifically designated areas where wild horses and burros were found in 1971 to be areas that would continue to be devoted "PRINCIPALLY" to wild horses and burros,</p>	<p>Wild Horse and Burro <u>Ranges</u> are designated through the land use planning process. They are managed <i>principally, but not necessarily exclusively</i>, for wild horses and burros. To be considered for designation as a Wild Horse or Burro Range, the HMA must have unique herd characteristics, outstanding viewing opportunities, unique landscape, or significant historical or cultural features.</p> <p>BLM manages four WH&amp;B Ranges: the Nevada Wild Horse Range (1962), the Pryor Mountain Wild Horse Range (Montana, 1968), Little Bookcliffs (Colorado, 1980), and the Marietta Burro Range (Nevada, 1991). Wild Horse and Burro Ranges require a Secretarial designation which is beyond the scope of this EA.</p> <p>Neglecting to manage HMAs as multiple use area would not be in conformance with the existing land use plan and is contrary to the BLM's multiple-use mission as outlined in the 1976 Federal Land Policy and Management Act (FLPMA), and also would be inconsistent with the WFRHBA and the Public Rangelands Improvement Act of 1978 (PRIA). It was Congress' intent to manage wild horses and burros as one of the many uses of the public lands, not a single use. Therefore, the BLM is required to manage wild horses and burros in a manner designed to achieve a thriving natural ecological balance between wild horse and burro populations, wildlife, domestic livestock, vegetation and other uses. However, the BLM may designate specific herd</p>
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			<p>management areas to be managed principally, but not necessarily exclusively, for wild horse or burro herds. While designation doesn't necessarily change how the HMA will be managed, it does recognize the special role wild horses or burros have in the area.</p> <p>Refer to Section 3.1.7 of the EA and applicable sections of the previous EAs to review the livestock permitted in these areas. Actual use is reflected in Animal Unit Months which are defined as the amount of forage necessary for the sustenance of one cow or its equivalent for one month.</p>
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